TEXTILE WORLD

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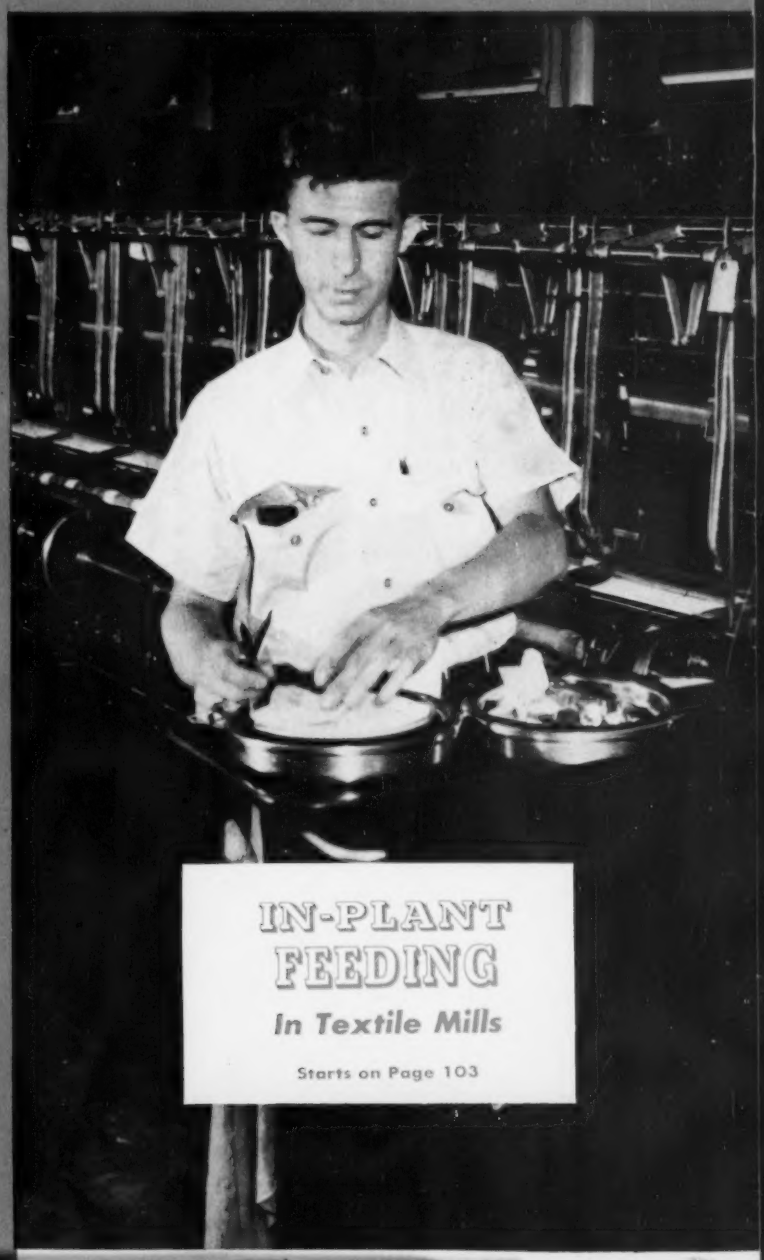

IN-PLANT FEEDING

In Textile Mills

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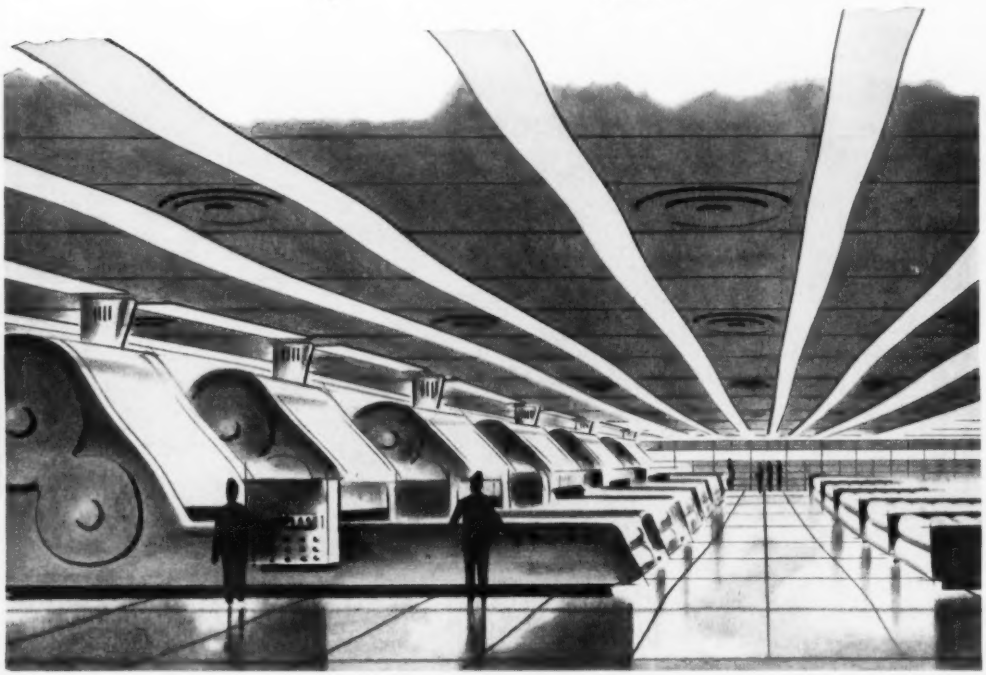

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THE *Long-Range* VIEW

Formula for Success

Two very significant reports on U. S. textile mills have just been released. Certain conclusions in these reports are rich food for serious thinking. From them, a formula for success in mill operation can be derived.

The first—and more important of the two reports—is that of the *1950 British Productivity Team. It is a* vigorous, positive report that challenges mills to action and points the way to profitable operation.

The second is the recent report to President Truman made by a group of economic analysts on what is wrong with New England industry. This study was not confined to the textile industry, and the report makes a few recommendations that will raise the blood pressure of mill men in other sections of the country. Nevertheless, the report contains a few findings that deserve the closest attention of top-management men, supervisors, workers, and union officials.

Actually, there is nothing new in either report. What happened was that highly successful mills were compared with unsuccessful or less-successful mills, and some exceedingly shrewd conclusions were drawn as to what causes success and failure in mill operation.

Here are some of the recommendations made by the British Productivity Team. The list could well be used by every key man in the industry as a checklist for mill operation.

1. Discuss widely and freely technical and administrative improvements.
2. Cooperate fully in trying out new ideas and experiments.
3. Plan and control production systematically.
4. Specialize on certain products.
5. Help develop and use industry-wide standards.
6. Break down jobs into tasks and train workers as specialists on certain tasks.
7. Educate foremen and other junior executives in the best technical and administrative practices; then delegate authority to them freely.
8. See that top-management men have sound technical and business training.
9. Set job and work loads realistically and scientifically.
10. Develop good management-worker relations.
11. Modernize mill buildings and machine layout and install the latest high-speed machinery and auxiliary equipment.

The New England report drew a picture of what happens in an unsuccessful mill. In general, what goes on is the exact opposite of the eleven recommendations just given. The picture contains dismal accusations such as these: management lacks ability, stockholders milk the mills for all the money possible, workers refuse to increase their machine-unit work loads, unions persist in their "one-track" efforts, etc. What it all boils down to is a collection of closed, suspicious minds, bull-headed fighting for self-interest, and a total lack of coordinated common-goal activity. Results: inefficiency—failure—extinction.

There are vital lessons in these two reports. Stockholders, management men, supervisors, workers, and union leaders should read them and do some serious soul-searching. There is no question that the textile industry will keep going. The only question is, will YOU keep going?

The formula for successful mill operation that fairly leaps out of these reports is this:

1. Good management and administrative practices.
2. A vigorous, competitive, ambitious work force.
3. A well-engineered, well-equipped mill.

These factors are absolutely essential. With them, a mill is a success. Without one or more of them, the mill is not a success.

It is evident that the core of the formula is the operating management. If a mill is physically rundown and unprofitable except in periods of emergency, top management—past or present—is responsible. If labor relations are so "lousy" and the union has such a strangle hold that technical improvements can't be made profitably, top management—past or present—either caused the mess or permitted it.

It is refreshing and highly instructive to note that both reports put a very heavy finger on the decisive spot of management quality: mental attitude. For inefficient mills or mills that do not have all three of the conditions set forth in the above success formula, the decision is harsh but uncompromising: Give your own mental outlook a thorough going-over. The time may come, and relatively soon, when stubbornness and prejudices may cost you a mill.

D. H. Thomas

EXCLUSIVE FEATURES

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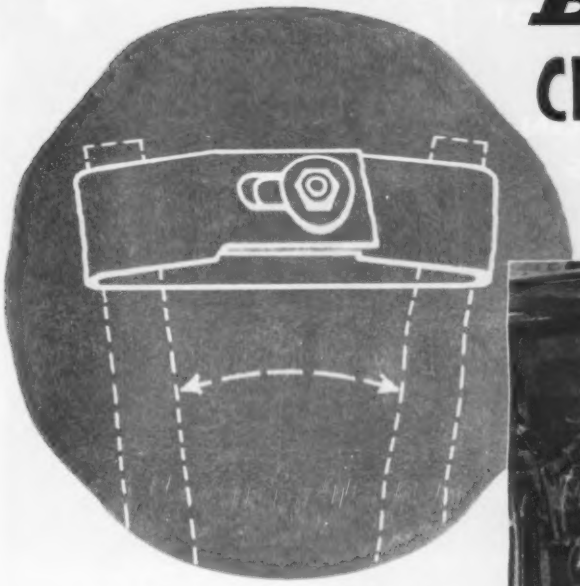

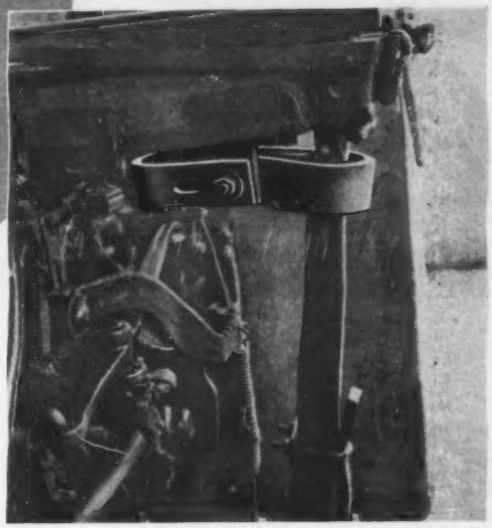

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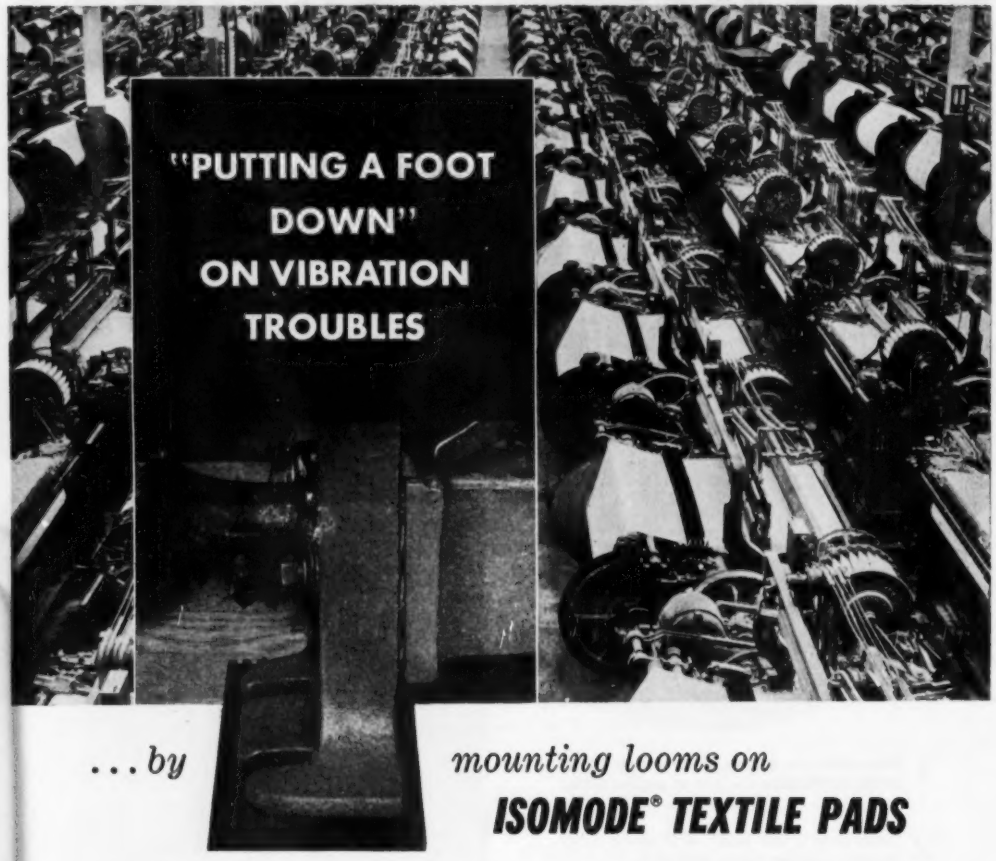

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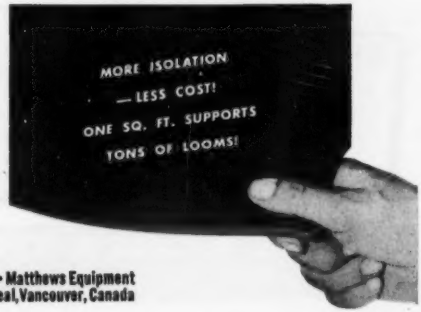

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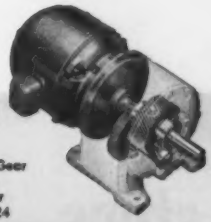

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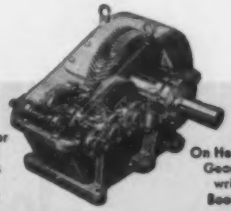

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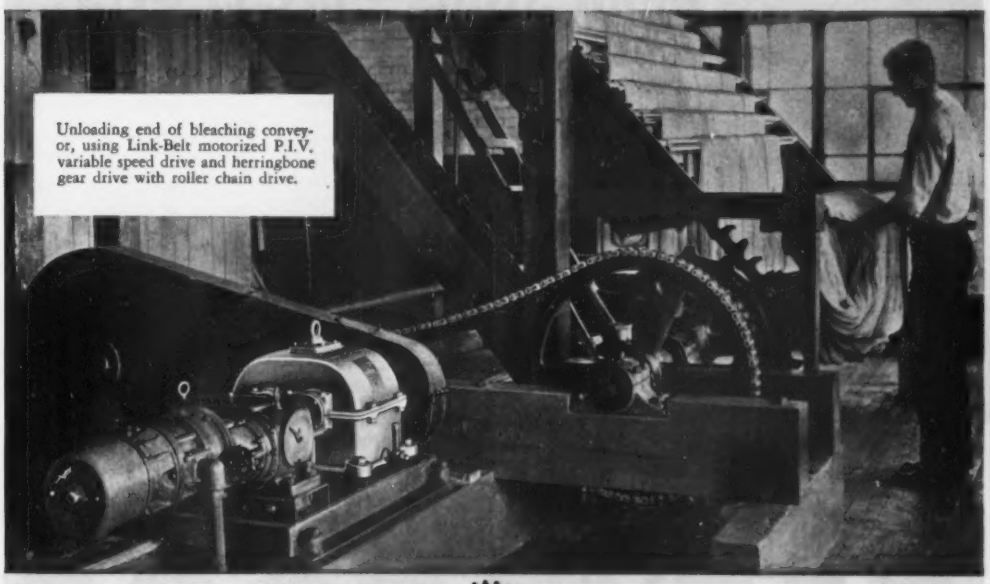

Unloading end of bleaching conveyor, using Link-Belt motorized P.I.V. variable speed drive and herringbone gear drive with roller chain drive.

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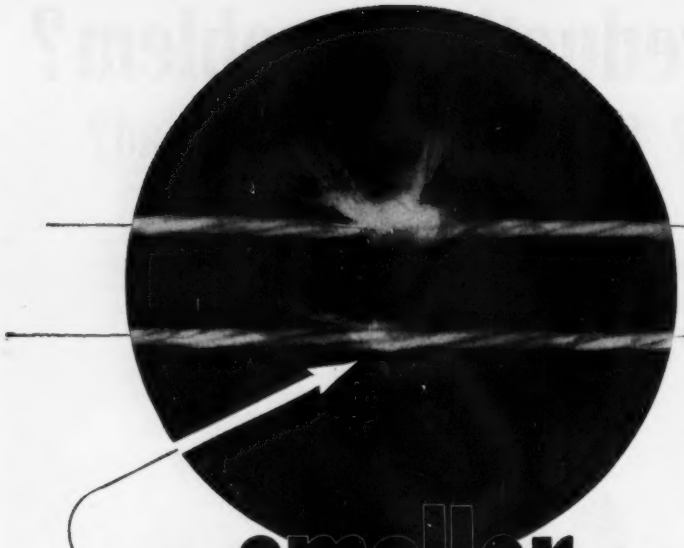
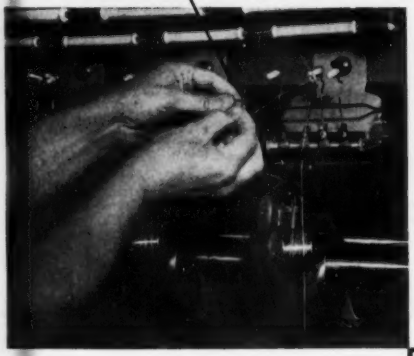


the **smaller** knot reduces loom stops—press offs



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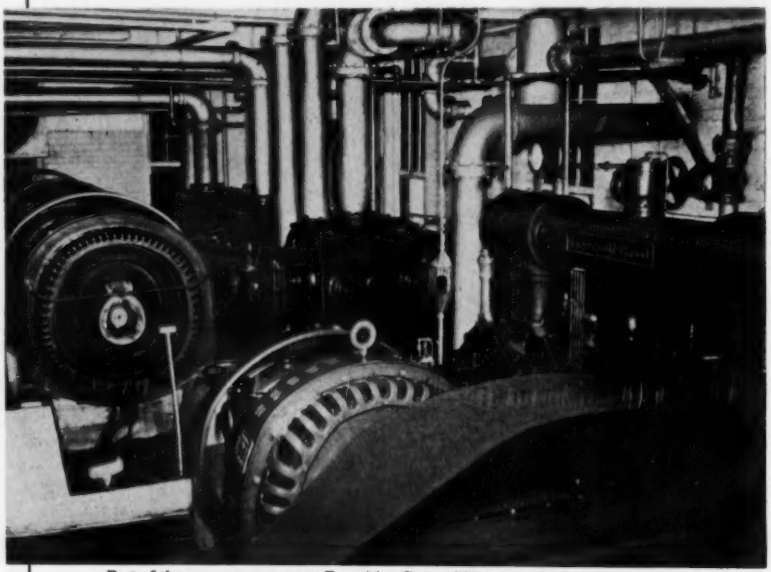
It's I-R *for* AIR POWER

at Exposition Cotton Mills



Part of the compressor room at Exposition Cotton Mills, showing the 125-horsepower XRE two-stage 100-psi compressor (foreground) and three of the four 125-horsepower ES single-stage units, equipped with 3-step clearance control for maintaining 30-psi pressure within a 2-psi range.

It takes a lot of *air power* to operate a big, modern textile plant like the Exposition Cotton Mills. The compressors that supply this air power must be able to stay on the job around the clock, day after day, year after year. Operating economy is mighty important, too.

That's why Exposition is so well pleased with the I-R equipment which supplies *all* of its air-power requirements. Four Ingersoll-Rand, ES compressors installed as part of Exposition's multi-million dollar modernization program were installed by the American Moistening Co. for the operation of evaporative cooling atomizing heads. These machines have *never* had an enforced shut-down. The same is true of the XRE compressor, installed in 1945, for general mill service. It has given approximately 50,000 hours of trouble-free operation.

Dependability like this—plus high operating efficiency and ease of inspection and maintenance—makes I-R compressors an excellent long term investment for any textile plant. Your nearest I-R representative will be glad to give you complete information on the right equipment for *your* air-power requirements.

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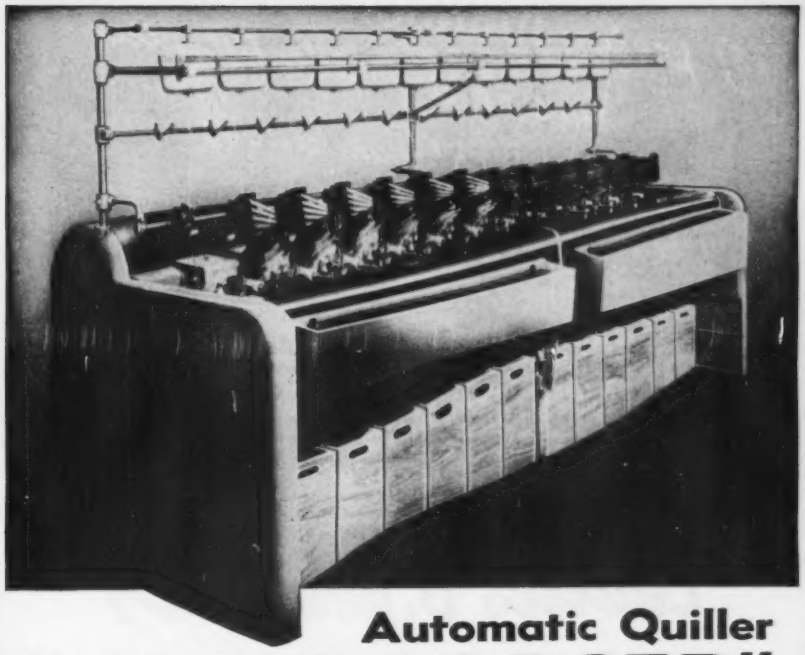

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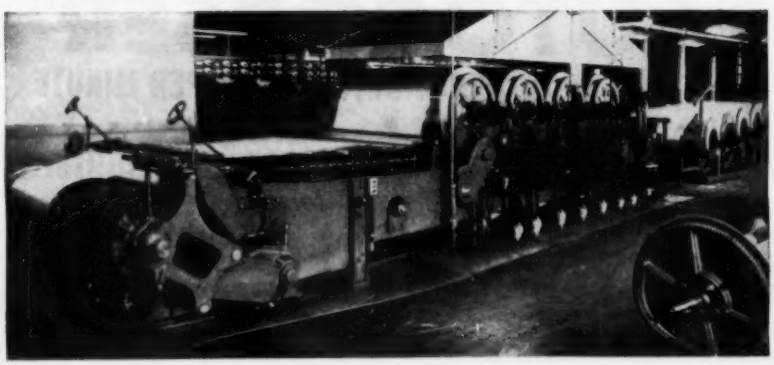

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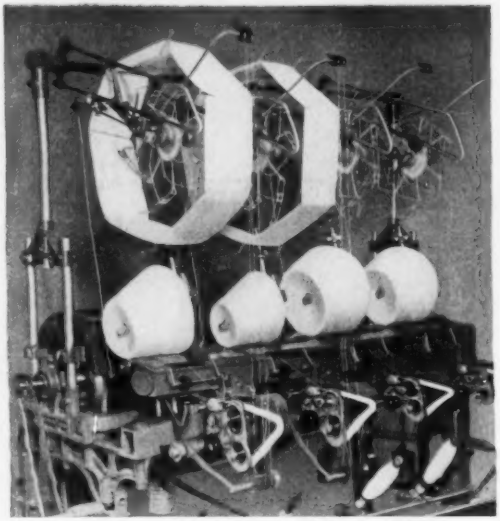

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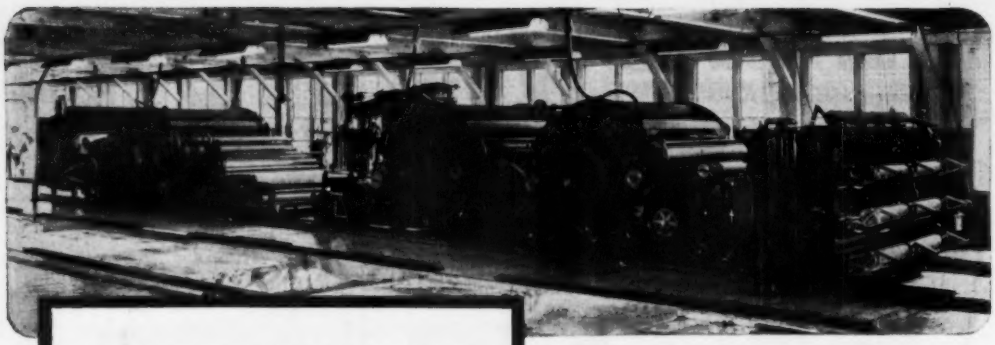

Shown here: 3-cylinder set, with Peralta Machine. Also available in 2-cylinder and 4-cylinder sets.

Duesberg-Bosson Automatic Card Feeder

SIZE: either 78¾" or 72¾" wide, to match the dimension of the carding machine.

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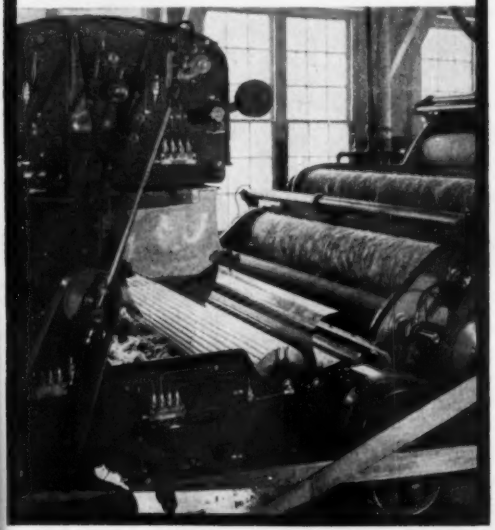
SPIKE APRON STRIPPING COMB: heavy duty type, precision made, accurately balanced; not subject to vibration or backlash at stripping comb speeds.

SCALE PAN: sensitive weighing device automatically prevents overweighing of stock.



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10. Lower power requirements.
11. More efficient lubrication.
12. Less capital investment.

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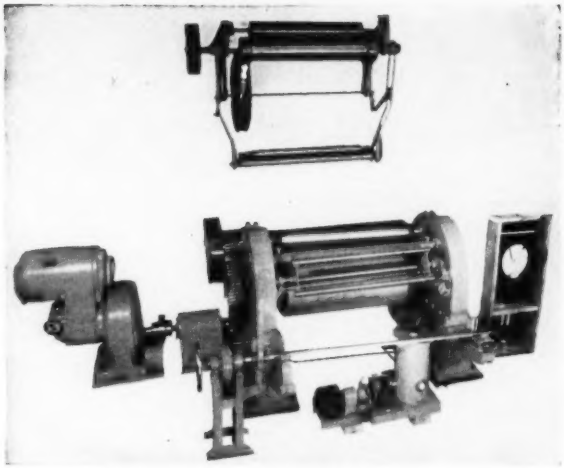

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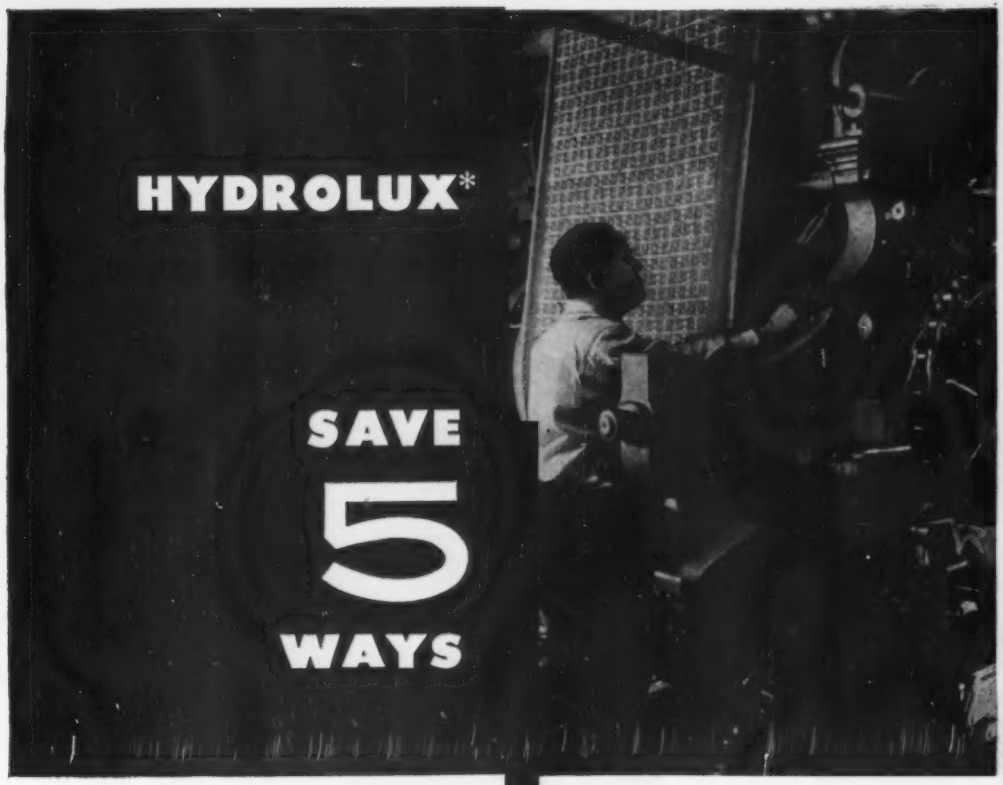

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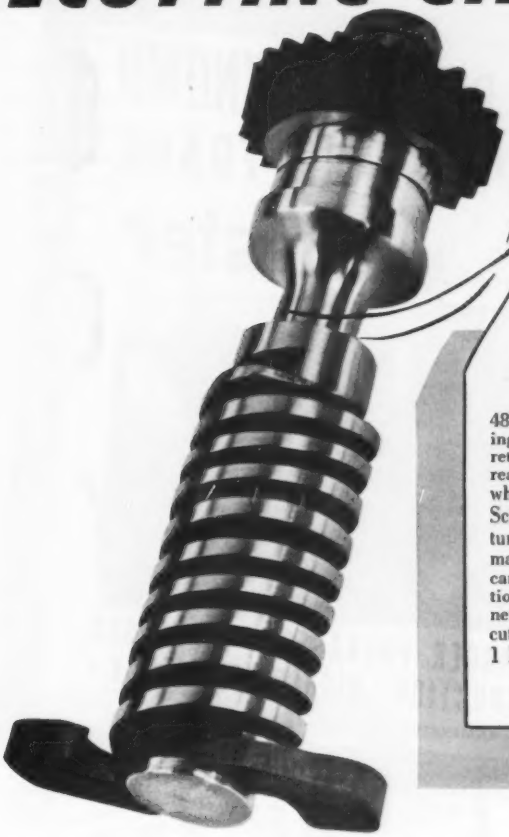

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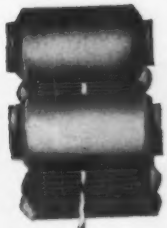

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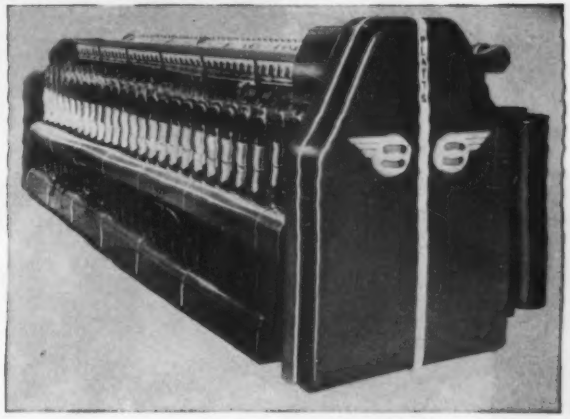

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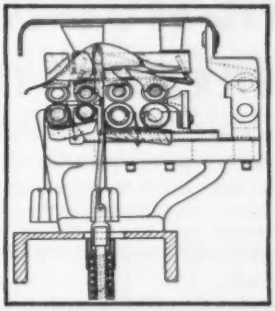

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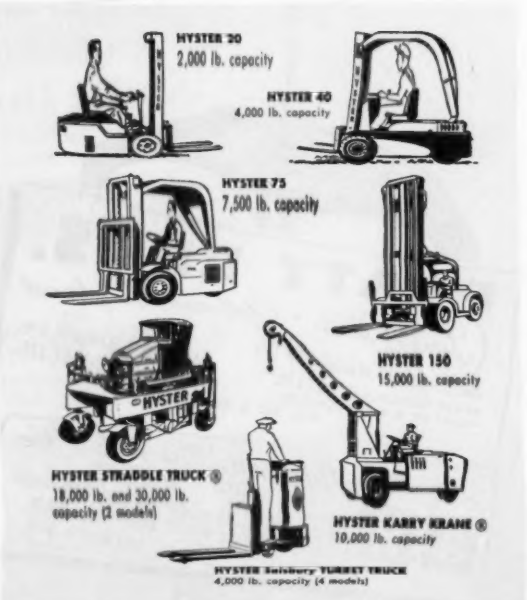

Thousands of tiny steel balls hammer the metal—"cold work" each roller. This shot-peening gives the roller added ability to withstand the shock and impact of today's higher speeds and heavier loads.

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the FEW extra ¢ents that make a LOT of sense

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NOPCO* 1656-R...

1 ***provides excellent lubrication and eliminates static in worsted sliver. Result: no fly from top treated with this oil—fewer ends down in spinning and winding—much less brush waste;***

2 ***increases the drag, and thereby gives a better draft—resulting in more even and cleaner yarn;***

3 ***scours out with phenomenal ease—actually converting into suds when used with alkali, polyphosphate and water;***

4 ***applies equally to all production systems —American, Bradford or French—and is extremely advantageous on pin drafters.***

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Yes, it will profit you to use Nopco 1656-R wherever you employ a lubricant in your top-processing procedure. And it will profit you to specify Nopco 1656-R, as a number of spinners already do, whenever you purchase oil-combed top. You'll pay a few more cents above "rock bottom" perhaps, but when you examine your finished yarns, you'll know you have produced high quality products with surprising economy.

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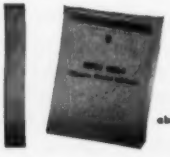

Send for your FREE copy of this bulletin giving detailed information about Nopco* 1656-R

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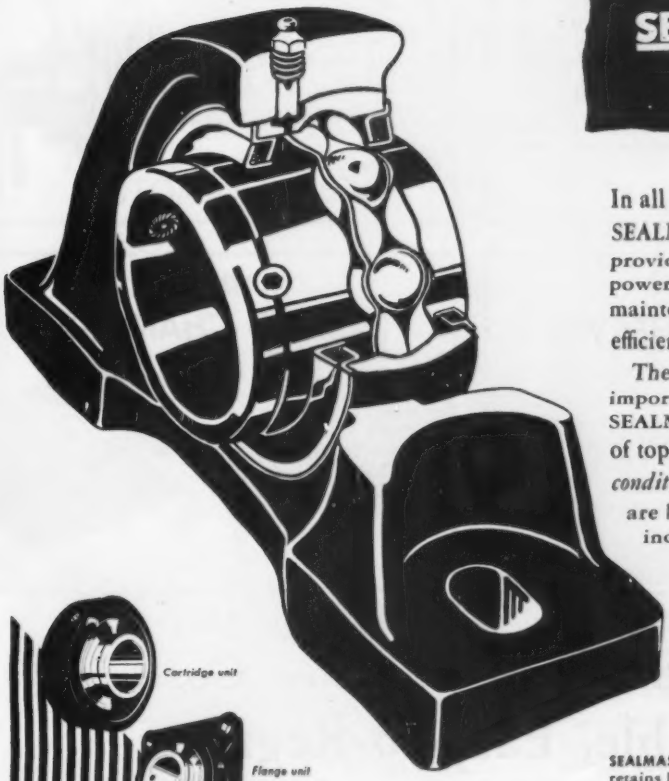

In all types of machines, SEALMASTER Ball Bearing Units provide smoother operation, reduced power consumption, minimum maintenance and general all-round efficiency.

The exclusive combination of important features found only in SEALMASTERS is the best assurance of top performance *under all conditions*—superior qualities that are built right into each individual bearing.

Write for your copy of Catalog 845 which gives dimensions, load ratings and other data on the complete line of SealMaster Bearing units. If you have a special bearing problem ask one of our bearing specialists to assist you.

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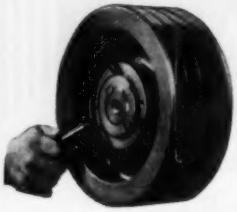
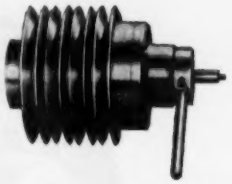
MAGIC-GRIP SHEAVES



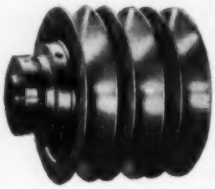
Fastest mounting sheave you can buy. Semi-steel sheave with interchangeable tapered split bushing. Aligns easily . . . cannot shake loose. Available as companion sheave for wide range belts. All sizes in stock.

VARI-PITCH STANDARD SHEAVES

Speed range up to 28% on drives of one to 300 horsepower, using A, B, C, D, or E, belts. Two to 10 grooves. These sheaves are available in motion control or stationary control types.



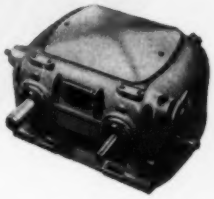
VARI-PITCH WIDE RANGE SHEAVES



Offers stepless speed control... one to 40 hp. Speed range up to 2 to 1. Made in stationary and motion control types. 1-4 grooves, Q or R belts.

VARI-PITCH SPEED CHANGERS

You get smooth, accurate speed control at the turn of a hand wheel. You operate your machines at exactly the right speed for highest production. Stepless speed range: 3¾ to 1 Capacity: 1½ to 75 hp.



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YOU CAN BE confident of getting the right drive from the *Texrope* line. And you are helped in your choice by experienced men who are trained to give you specialized service for textile needs. They have the added skill that comes from having more industrial V-belt installations than any other manufacturer.

As you may know, multiple V-belt drives were originated by Allis-Chalmers to meet the requirements of the textile industry.

Today you can get every V-belt drive component from the *Texrope* line: constant speed drives; standard and wide range *Vari-Pitch* drives; speed changers; motor bases; and new or replacement, long lasting *Super-7* V-belts. Allis-Chalmers, Milwaukee 1, Wis.

A-3482

Texrope, Vari-Pitch, Super-7, Magic-Grip, and Texslide are Allis-Chalmers trademarks.

in V-Belt Drives!

TEXSLIDE MOTOR BASES

This textile mill uses *Texslide* motor bases to permit compensation for belt stretch or changing center distances when adjustments of pitch diameter are made. Base consists of plate sliding in machined slots.

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Greatest Name in V-Belt Drives

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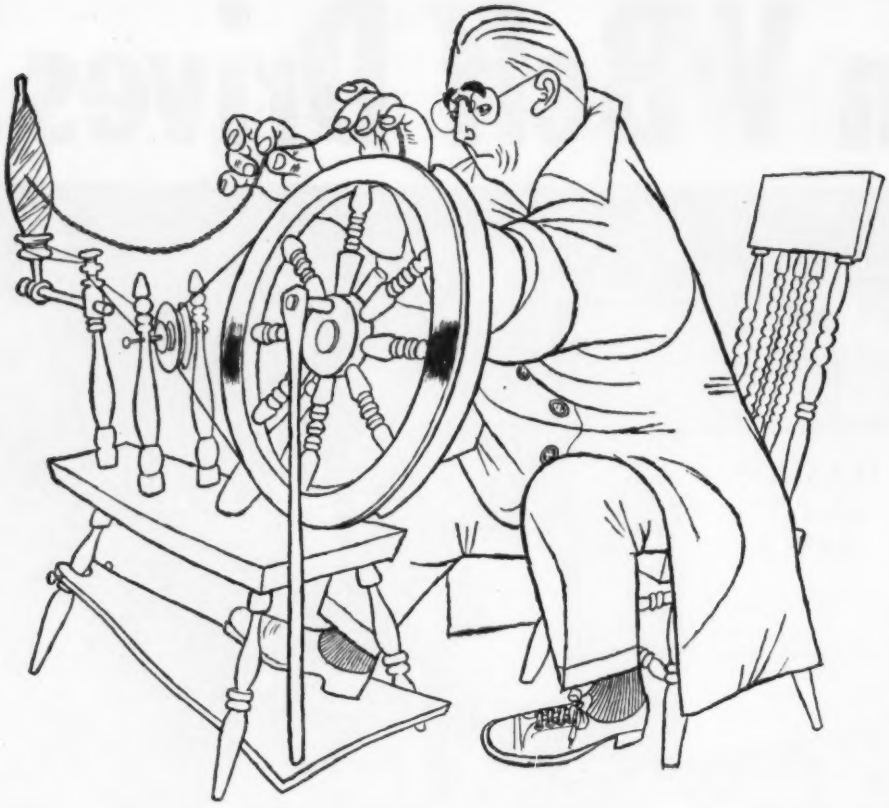
Originator of the Multiple V-Belt Drive for the Textile Industry



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and application
is located nearby

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Each U S sales representative is a *specialist* in the selection and application of bobbins, shuttles and other U S products. Each devotes *full time* to helping millmen get top efficiency and economy with yarn carriers in every processing operation, from fiber to fabric.

And every U S representative is backed by a carefully integrated manufacturing and distribution system which is unmatched in the industry.

Every facility, from forest to frame — from logging to looms — is U S owned and controlled — the reason why the U S 93-year reputation for topmost quality can be steadily maintained.

U S is ready, now, to equip your mill with the cost-cutting new designs in yarn carriers you need to beat today's cost squeeze. The U S representative near you will call at your request to discuss your requirements. You'll find that most U S products can be delivered when you want them, without delay.

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Selected hardwoods from extensive U S owned timber lands are formed into blanks and conditioned in modern kilns at U S roughing mills.

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From the rough blanks, bobbins, shuttles and other wooden yarn carriers are manufactured in U S plants located near the centers of textile manufacture, North and South. A sales office operates in each of these plants.

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Conveniently located in all other textile producing areas, U S separate sales offices and agents provide quick service to nearby mills.

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GAIR **FOLDING CARTONS!**

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Gair Containers and Gair Cartons both possess powerful advertising and selling features...a great stimulus to impulse buying which is a potent factor in today's SELF-SERVICE selling.

Still on Top!

with the many exclusive performance features that have made

ECLIPSE BOBBIN HOLDERS

THE FAVORITE!

The many exclusive features built into the Eclipse Bobbin Holder have made it the favorite of many leading textile organizations. They have found in actual operation that the Eclipse Bobbin Holder is outstanding in every way, and that the Eclipse reputation for basic quality and goodness is well deserved. If you are interested in modernizing your present plant equipment, you will surely want the finest—and the finest means Eclipse. Investigate today by writing or calling the Eclipse Machine Company direct.

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1. Completely replaces wooden skewers.
2. Ball bearings minimize friction, resulting in uniform quality of roving.
3. Permits less twist. Tests indicate yarn of more even texture.
4. Creel boards easily cleaned. Overhead suspension leaves open creels. Blowers more effective.
5. Better spinning of spun rayon.
6. Easier creeling; less physical effort and fewer motions required.
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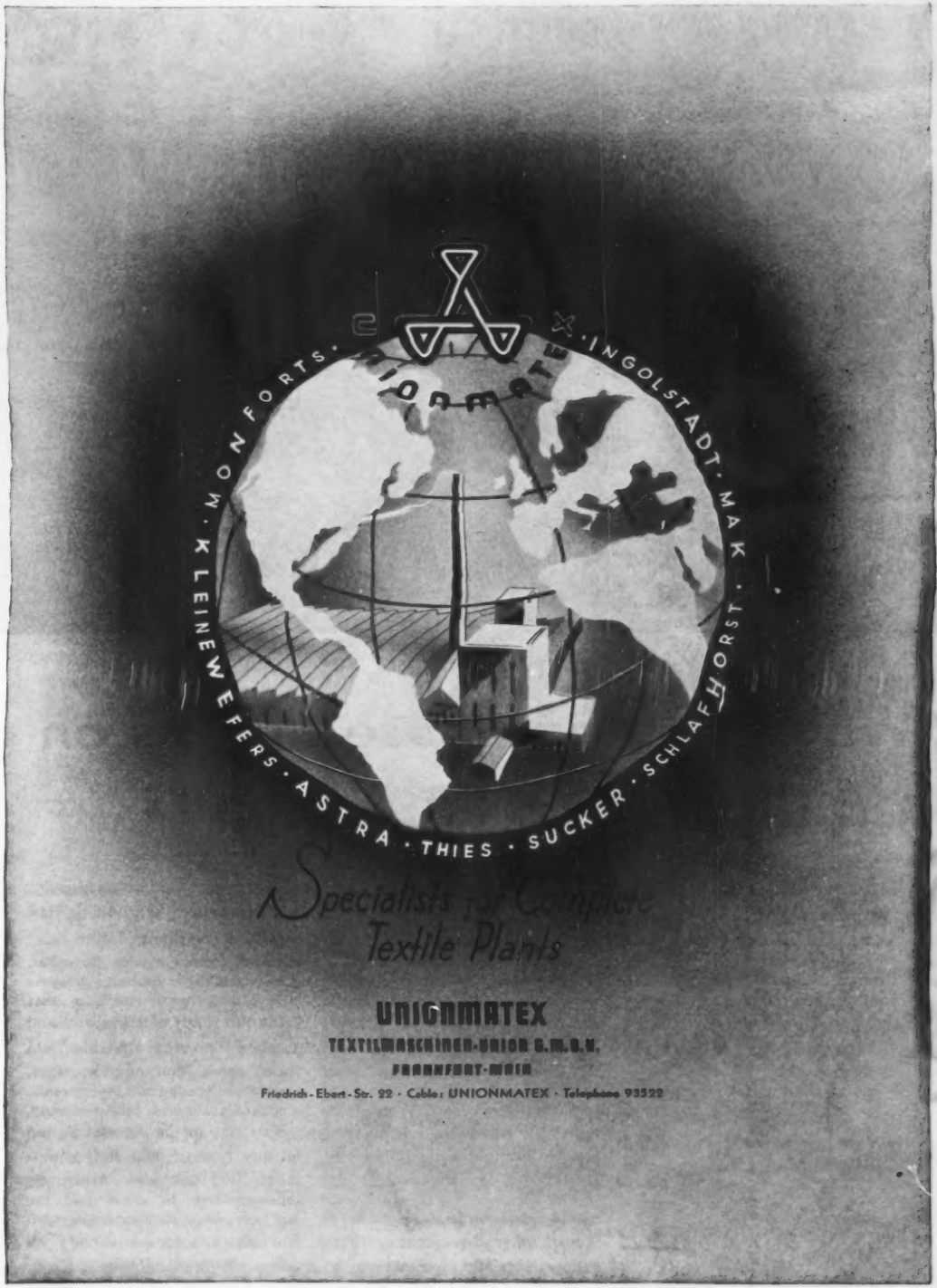
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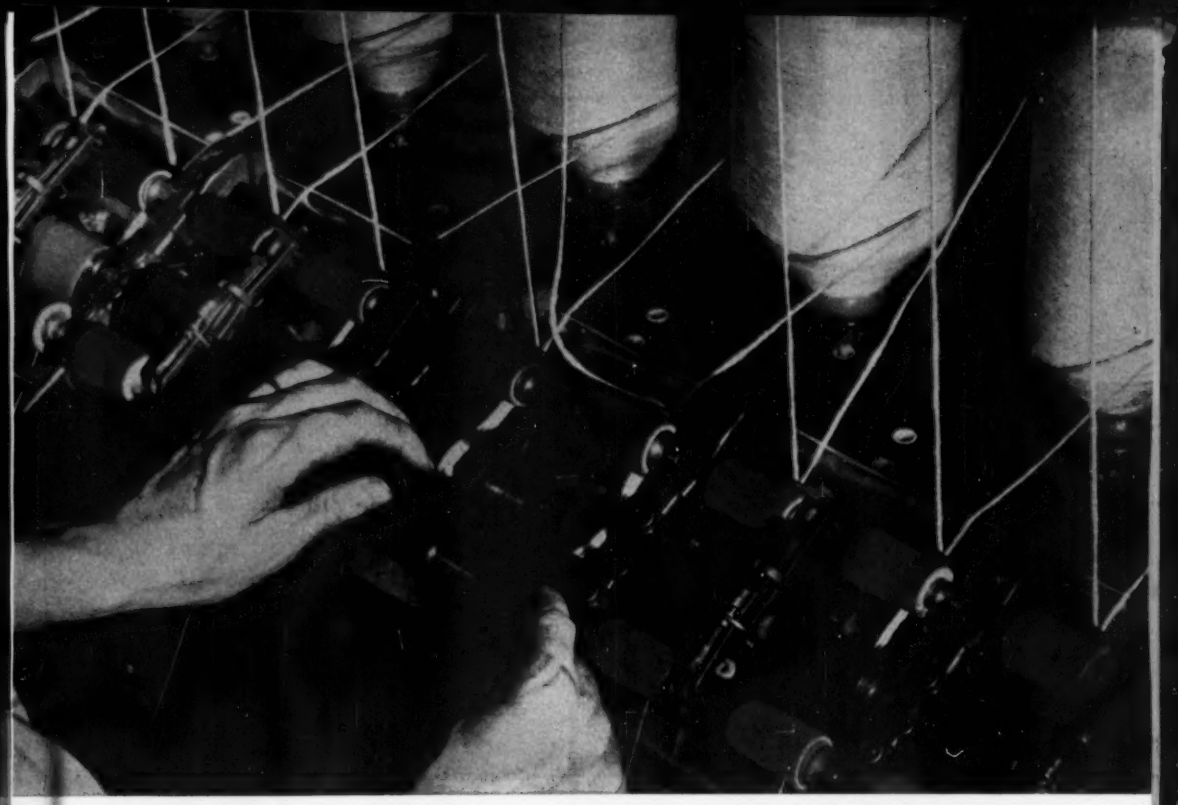
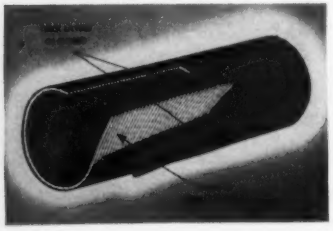


When you put these aprons on they STAY on for years

It has taken years to prove it, but now mills everywhere are beginning to find out that it takes a long, long time to wear out an Armstrong's Accotex® Apron. At overhaul periods, careful examination time after time leads to the same decision: "They're still good. Put them back on."

A Georgia mill, for example, ran a set of NO-700 Accotex Aprons on their Casablanca frames two shifts a day for eight years. At the end of that time the aprons were still free from cracks and roughness, still running as clean as the day they were put on.



The reason Accotex Aprons stand up so well is simply this: They are made in three layers—a special construction developed and patented by Armstrong. Each layer is scientifically designed to perform its own special function.

The outer layer is a seamless satin-smooth drafting surface. It is made of scuff-resistant synthetic rubber specially formulated for good drafting and clean running. A patented treatment given to each apron imparts extra smoothness.

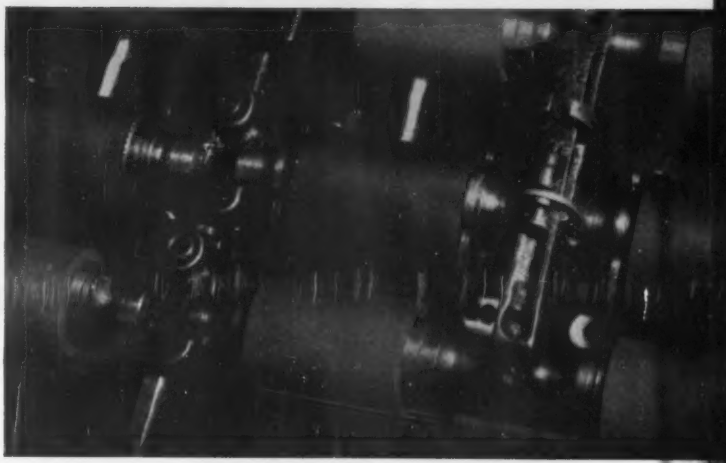
The inner layer is also a seamless sleeve made of synthetic rubber. This is compounded to resist abrasion caused by the nose bar.

Between these specialized layers is a sturdy cord interliner that holds the shape of the apron and absolutely prevents stretching and curled edges. Vulcanized together, these three specialized layers make a rugged apron that lasts for years.

You can get an Accotex Apron for any type of long-draft equipment. Just ask your Armstrong representative to show you the one best suited to your needs. Call him today or write Armstrong Cork Company, Textile Products Dept., 8308 Arch St., Lancaster, Pa. Accotex Aprons are available for export sale.

SATIN FINISH: Rub your fingers across the surface of an Armstrong Accotex Apron. You'll discover it feels smooth as satin. Each Accotex Apron is ground to the exact thickness you specify and—by a patented process—given this smooth, scuff-resistant surface.

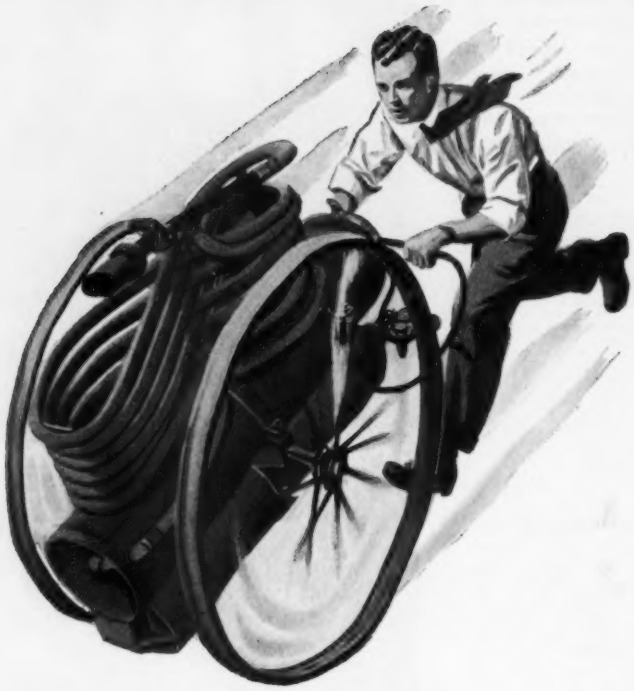
CLEAN-RUNNING: Because Accotex Aprons stay smooth, don't absorb oil or soften from exposure to dyes and commonly used textile solvents they have no tendency to pick up lint. They won't sweat under any mill condition. If you want a durable, clean-running apron, you can't beat Armstrong's Accotex Aprons. Try them on a test frame.



SUPER-FLEXIBLE: Armstrong's NO-750 Accotex Aprons have the extra flexibility and abrasion resistance needed on a single-apron frame. They hug the nose bar without buckling and so insure smooth slip-roll action. If you are considering new single-apron long-draft equipment, be sure to specify Armstrong's Accotex Aprons.

ARMSTRONG'S ACCOTEX APRONS

one of Armstrong's complete line of Textile mill supplies



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You *can* control a roaring fire in inflammable liquids, live electrical equipment, textiles or L-P gas. The Kidde 150 Pound Dry Chemical Wheeled Extinguisher packs a fire-fighting wallop that brings large fires under control quickly and easily.

The new "instant flow" hand control enables you to beat back fire with a long range "straight" stream... or to blanket the fire completely by the wider coverage which you get from the improved "fan" pattern.

One man can wheel this extinguisher through a standard doorway... apply 150 pounds of fire-smothering dry chemical in less than one minute.

Write for complete information on this new Kidde Dry Chemical Wheeled Extinguisher . . . or the full line of Kidde fire extinguishers and built-in systems.

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OVER 500 MILLS USE THEM!

Lick your Tension Problems with Kidde Compensators!

You can stop worrying about losses from uneven tensions when you use a Kidde Compensator. There are three Kidde models designed to meet varied tension problems. Mills all over the country are now using thousands of them.

The Standard Model is specially designed for *moderate* speeds (approximately 300 yds. per minute) and tensions. Use it in quilling nylons and rayons . . . in warping rubber yarns . . . in winding of narrow fabric bobbins.

The Double Disc Model maintains constant tensions at speeds of approximately 1000 yds. per minute. It is excellent for tender, high twist yarns. Available in two types—10 to 140 grams and 100 to 300 grams.

The Warp Model maintains predetermined tensions uniformly on all warp ends. It produces smooth, level beams, eliminating troublesome slack and tight ends. Lost ends can be controlled by use of an available Kidde stop motion.

Fill in and send the coupon for full information on any or all of these effective Kidde tension compensators.

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Gentlemen:
Please send me additional information on the Kidde Compensators.
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Here is *Exactly WHY* a V-Belt with CONCAVE SIDES Gives You *Longer Wear!*

To see for yourself how a V-Belt that has *concave sides* is certain to give longer wear, just make this simple test:—

Pick up any V-Belt you have at hand. Bend that belt as it bends around a pulley. As it bends, grip its sides between your fingers. Here is what will happen *everytime*.

If the V-Belt you are testing has *straight sides*, you can feel those sides *bulge out* as the belt bends. This out-bulge forces the sides of the belt to press *unevenly* against the V-Pulley and you naturally get *concentrated* wear just where the bulge is greatest—as shown in figure 1-A, at right.

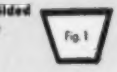
Now, make this same test with the belt that is built with *Concave Sides*—the Gates Vulco Rope!

Whereas you felt an *out-bulge* when you bent a belt with straight sides, you find that the *Concave Sides* merely fill out and become *perfectly straight*. The sides therefore *press evenly* against the V-Pulley. This distributes the wear *uniformly* across the *full width* of the belt. Naturally, this means longer belt life and *lower* belt costs for you!

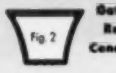
Only V-Belts made by Gates are built with concave sides. Whenever you buy V-Belts, be sure that you get the V-Belt with the Concave Sides—The Gates Vulco Rope!

What Happens When a V-Belt Bends

Straight-Sided V-Belt

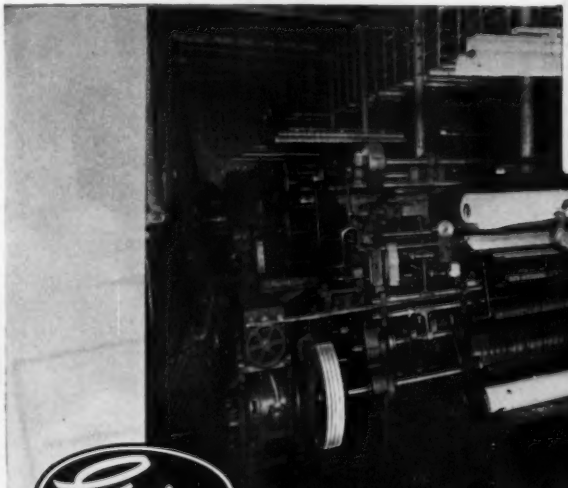


Gates Vulco Rope with Concave Sides



How Straight-Sided V-Belt Bulges in Sheave-Groove. Sides Press Unevenly Against V-Pulley Causing Extra Wear At Point Shown by Arrows.

The Concave Sides Fill Out to a Precise Fit in the Sheave Groove. No Side Bulge! Sides Press Evenly Against the V-Pulley — Uniform Wear — Longer Life!



31 lace machines at Field Crest Mills, Zion, Illinois, were originally driven by open gears. All were converted to Gates Vulco Rope Drives in 1946. Many of the drives still are using the *original* sets of belts.

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Hose V-Belts
Molded Rubber Goods
for Industry

VULCO ROPE DRIVES
ENGINEERING OFFICES AND JOBBER STOCKS
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SWIFT'S SOAP TEAM!

See your local Telephone Directory for address of your nearest

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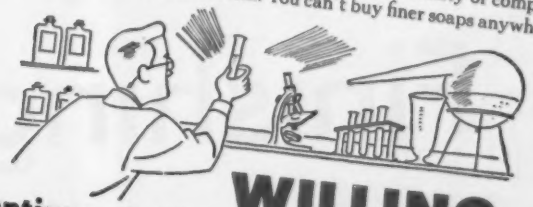
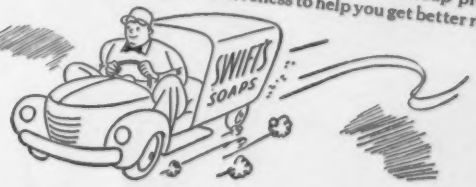
We're READY with quality soaps for every textile need!

You can always find the right soap for the job in Swift's complete line. Whether you need soaps for dyeing, fulling or scouring or any other specialized need, Swift's Soap Department is at your service. And you'll find that Swift's Soaps for textile uses have maximum uniformity of composition and excellent physical form. You can't buy finer soaps anywhere.



WILLING to continue Swift's research laboratory activities to develop better products for your purpose!

Our technical division is constantly working on textile problems. This means that Swift Soap products always have the quality and effectiveness to help you get better results.



And ABLE to give fast service from Swift distribution points coast to coast!

You can order any of the fine soaps listed below and expect immediate delivery. Remember—use good soap and enough of it! Good soap promotes economy for you . . . better products for your customers. *Vertex Flakes* • *557 Flakes* • *White Ribbon Flakes* • *Wool Flakes*

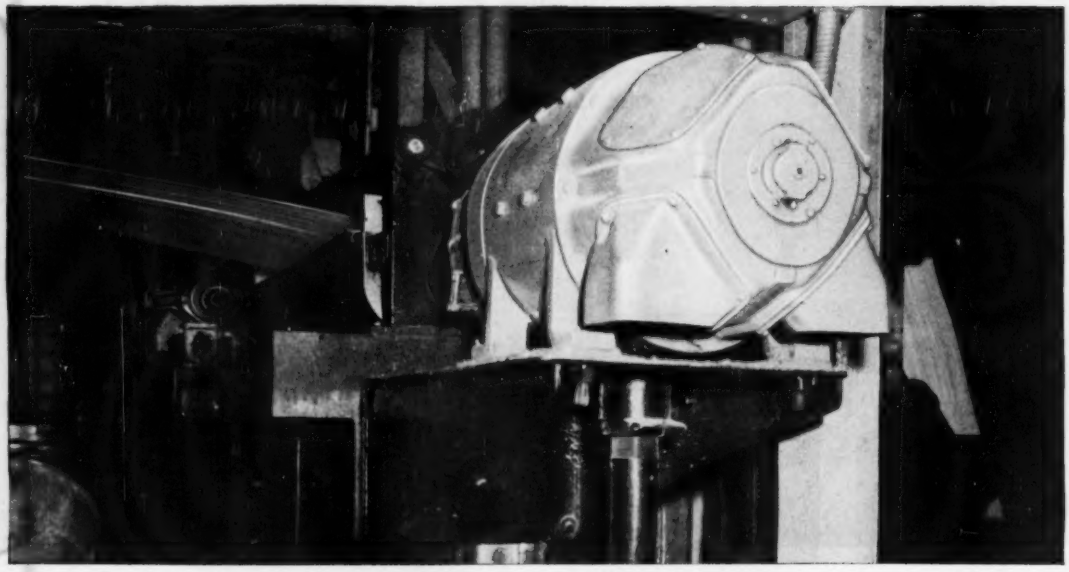
Plus other special formulations to meet your specifications.

Call SWIFT first for soaps

For more information, write direct or use Reader Service post card.

SPRINGS COTTON MILLS DEPENDS ON CO-ORDINATED G-E RANGE DRIVES

For Continuous High-Speed Finishing!

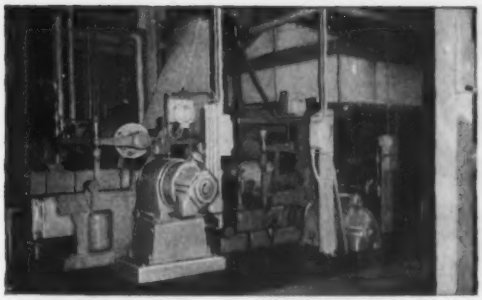


Singeing and De-Sizing Range at this bleachery comprises two 50-inch units driven by 15-hp G-E gear-motors (shown above) and a 110-inch unit driven by a 25-hp G-E motor. G-E motors also drive four pilers and three folders. Selection, manufacture, and delivery of all G-E equipment for this modern, high-output mill was co-ordinated by General Electric.

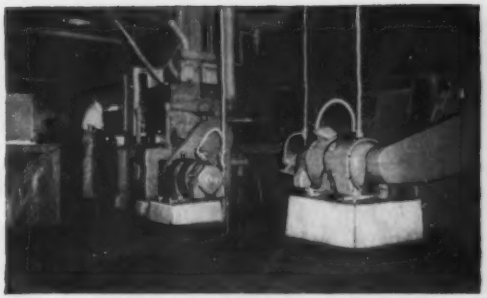
GENERAL ELECTRIC

654-19

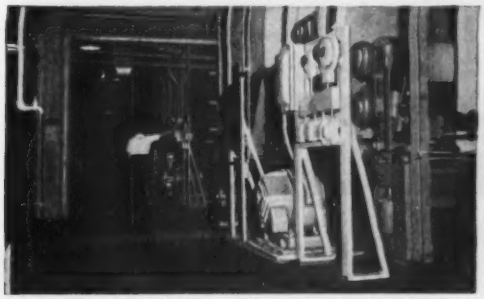
For more information, write direct or use Reader Service post card.



Mercerizing Range, (above) includes a 50-inch 2-roll water mangle and a 50-inch 15-ton 3-roll caustic padder powered by G-E gear-motors rated 20 and 25 hp. Other G-E motors run scutcher, tenter frame, washer and piler. By making it an all G-E plant, Springs Cotton Mills simplified ordering, saved time and effort otherwise required by piece-meal purchasing.



Rope Bleaching Range, one of three at Grace Bleachery, uses G-E motors throughout. Photo shows the tight rope hot washer and the tight rope squeezer connected to G-E 25-hp and 20-hp gear-motors. All G-E motors used in this plant were co-ordinated by G-E application engineers to assure an efficient smooth-working installation.



Finishing Range is one of six at this Springs Cotton Mills plant equipped with G-E motors throughout. Shown here are the scutcher, 3-roll water mangle, 10-can dryer, 2-roll starch mangle, 20-can dryer and 90-foot enclosed tenter frame. When the mill was completed at end of 1948, start-up time was minimized by G-E field-service engineers who checked initial operation.

Continuous Dyeing Range, with individual Williams units driven by G-E 7½-hp gear-motors, provides a range of cloth speeds from 37½ yards to 150 yards per minute, as well as threading speeds of 10 to 15 yards per minute. Like hundreds of other companies, Springs Cotton Mills finds it pays off to place full responsibility for electric equipment needs on General Electric.

Over 300 G-E motors in Grace Bleachery, South Carolina, help process 6 million yards of grey goods per week!

Quickly summarized, here are some advantages General Electric range drives can offer you—advantages that add up to efficient range operation, continuous high-speed finishing:

You get any desired speed range and jogging speed, easy control of overall speed from a central point, and close speed co-ordination for all motors by means of compensating gates or "soft" motors. Flexibility of operation is assured, with individual units easily disconnected from the range. If required, you can have dynamic braking for quick stopping and regenerative braking for controlled deceleration. And you can count on top reliability and low maintenance, with a simple, sturdy G-E gear-motor at each drive unit.

Here's more! G-E range drives are now also available in packaged form to give you the additional advantages of lower installed cost, simplified installation, and new ease of making changes in your plant layout.

Take a tip from Springs Cotton Mills. Save yourself time and trouble in modernizing or expanding any mill process by letting General Electric co-ordinate all your electric equipment needs. Ask your G-E textile-mill specialist to tell you the whole story on G-E range drives, as well as drives for any other textile-mill application. *General Electric Co., Schenectady 5, N.Y.*

RANGE DRIVES FOR TEXTILE MILLS

Before you modernize or expand your textile mill, see "Textiles Unlimited," General Electric's "More Power to America" full-color sound movie. A helpful, half-hour film, it shows how other textile mills are modernizing with profit, will give you at least 40 specific ideas on improving quality and cutting costs. Ask your G-E representative to arrange a showing.

How to win in a draw!

THE NEW IMPROVED DAYCO COT

with fiber repellence plus!

★ **SAVES LABOR COSTS**

★ **STOPS TIME-OUTS FOR ENDS-DOWN AND LAP-UPS**

This new "spinner" even tops the sensational service that other types of Dayco Cots have given! And, if you're now using ordinary cots, this new and improved Dayco will increase the cot life you're now getting by *years!*

It's made of an entirely new compound of American Rubber, scientifically blended for fiber non-attraction. Its non-stop performance cuts non-productive costs—the cost of time and labor required to cope with ends-down, lap-ups. It's versatile, too—use it for spinning all types of fibers: cotton, wool, blends or synthetics.

THE DAYCO LONG DRAFT APRON...

The precision apron

No false starts after a shut-down, when your frames carry Dayco Long Draft Aprons! Just turn on the power and spin, right from mill-opening on Monday. No warm-up period before you can begin production. "First apron I ever saw that you wouldn't lose a few with, when starting up!" says a South Carolina overseer.

Because it's precision made, you can change apron length by as little as 1/64" in diameter. Dayton's own exclusive method of marking for the two-apron system guarantees you a perfect fit, for any age or type of cradle. Thickness, diameter, and width never vary.

To learn more about these two fine tools for better drafting, as well as the other Dayco and Thorobred products, see your salesman; or write: *Dayton Rubber Co., Textile Division, Woodside Bldg., Greenville, S. C.*

Girls like this six-shooter are cuter, because Dayton's in on the draw, helping spin and weave winning costumes that make pretty cowpokes prettier.

Dayton Rubber

TEXTILE PRODUCTS FOR BETTER SPINNING AND WEAVING

WINDS QUILLS OF ANY TYPE

THE FOSTER-MUSCHAMP "AUTOQUILL"

VERSATILE, FULLY AUTOMATIC OPERATION

The Foster-Muschamp "Autoquill" is designed to produce automatically uniform packages of the highest quality. It will wind any type of yarn on stick quills varying from 13/16" to 5-1/2" traverse, with straight or oblique ends.

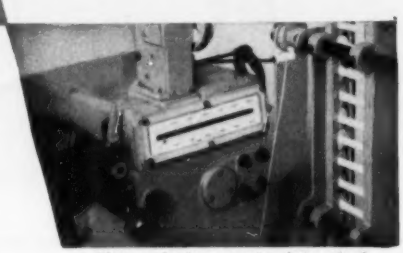
Normally equipped for single end winding, it can be fitted for winding as many as four ends at speeds up to 2,500 r.p.m. (stick quills) and 5,000 r.p.m. (flanged quills). The magazine holds 40 average size quills and is easily adjustable to cover the full range of quill sizes.

Contact main office or representatives for complete details.

FOSTER MACHINE COMPANY

Westfield, Mass., U.S.A.

Southern Office: Johnston Bldg., Charlotte, N. C. • Canadian Representative: Ross Whitehead & Company Limited, 1475 Mountain St., Montreal, Quebec, Canada • European Representative: Muschamp Taylor Limited, Manchester, England.



Close-up showing measuring device, visual traverse adjustment dial, and starting handle.

"AUTOQUILL" HIGHLIGHTS:

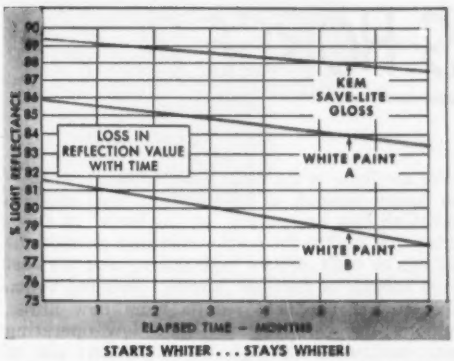
- Choice of 4 cams for traverse lengths from 13/16" to 5-1/2".
- Adjustable visual scale for direct reading of traverse length.
- Instantaneous stop motion.
- Accurate yarn measuring device and visual scale for reading yarn length wound.
- Taper end mechanism adjustable from straight to full taper ended quills.
- Drive: Requires 1/10 h.p. per spindle.
- Rugged construction for maximum stability and minimum vibration.

FOSTER F WINDERS

QUALITY WINDERS FOR ALL TYPES OF YARNS

MAKE THIS TEST

before you paint your plant!



STARTS WHITER . . . STAYS WHITER!

Note how the whiteness, or reflective value, of Save-Lite *starts* higher than conventional finishes when first applied, and *continues* higher, as time goes on. This means *longer* intervals before repainting is required.

Compare KEM SAVE-LITE with ordinary whites

SEE why it stays cleaner—longer!

See for yourself the difference there can be in the whiteness of "white" finishes . . . even when they are first applied! Make a side-by-side comparison of KEM SAVE-LITE Mill White against conventional white finishes on any wall surface in your plant.

You can see the difference, from the start, in gleaming, brilliant whiteness...a difference because of the *controlled*, light-reflective properties that are designed into SAVE-LITE Mill White Finishes.

KEM SAVE-LITE *starts* whiter . . . KEM SAVE-LITE *stays* whiter, as the actual light reflectometer measurements in the comparative chart show. You'll find these same properties, too, enable it to hide better and cover farther! Call your Sherwin-Williams representative today for a demonstration, or write The Sherwin-Williams Co., Cleveland 1, O. (Division Offices, Charlotte, N. C. and Boston, Mass.)

SHERWIN-WILLIAMS

INDUSTRIAL MAINTENANCE FINISHES

SAVE-LITE MILL WHITE • COLOR HARMONY FINISHES

MILL VILLAGE PAINTS

Which is the Winning CLOTHES-HORSE?

...in this Race that begins in the Weaveroom!

When the public picks a winner in the hell-for-leather Steeplechase of today's clothing markets, chances are they've picked a fabric woven on C&K's convertible, versatile Call Box Looms.

In fact, here's something worth passing along to the clothing manufacturer, to the retailer, and then to the customer:

THIS FABRIC WOVEN IN THE USA...ON LOOMS BY C&K

For the loom is the establisher of fabric value—the heavy weapon of competition. And modern C&K Call Box Looms are "on the beam" in every factor that makes for market-winning promotions that can be built only on high quality and low cost ...top volume of flawless fabrics...amazing versatility, to get the best results from new fibres, fashions and constructions...and low operating costs, controlled through the consistent use of Certified C&K Loom Parts. And speaking of C&K versatility, are you making *full use* of it? You might come up with another winner, yourself!

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa. • Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

Denman jumped ahead by developing the first successful rubberized fabric picker in textile history, but it takes consistently superior running and wearing qualities for Denman Pioneer to *remain* the Number One choice of the industry.

Mills continue to use Denman more than any other picker because of its steady, balanced performance on the loom. Denman pickers give them the combination of toughness and resiliency that best cushions the shock of heavy shuttle blows . . . minimizes wear on shuttles, sticks and pickers. Mill men choose Denman above all other pickers for

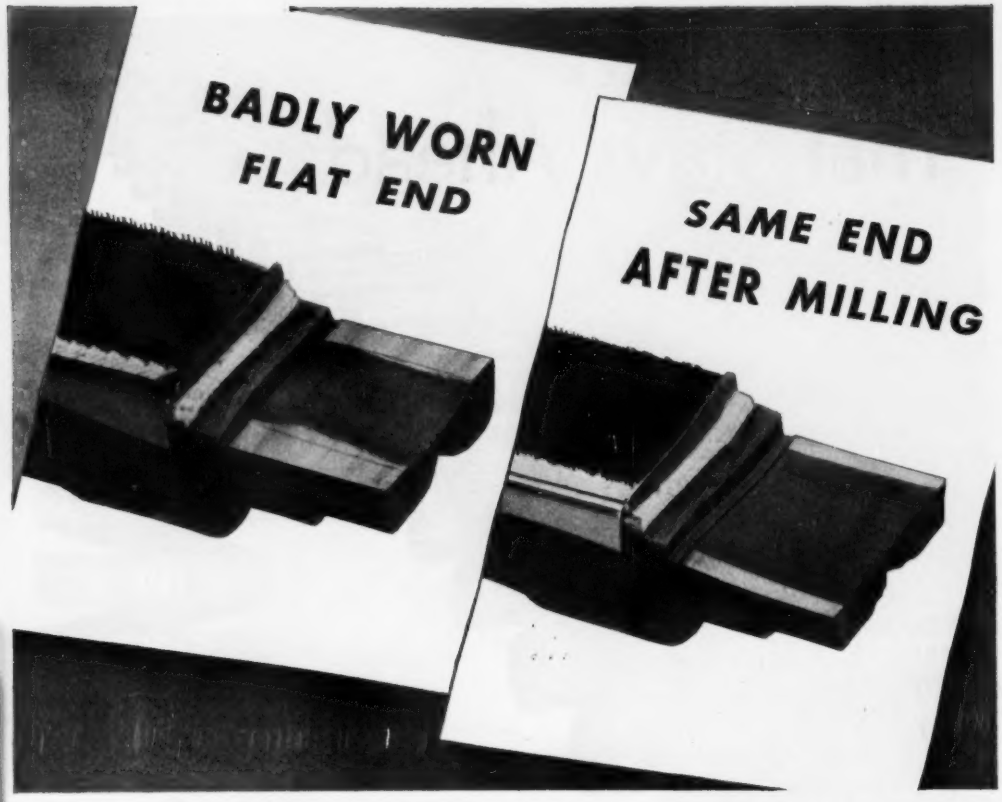
Lowest Cost Per Loom Per Year

Made by
DENMAN
Tire and Rubber Co.

Exclusive Sales Representative

The TERRELL MACHINE CO., *Inc.*

CHARLOTTE, N. C.



Remill Your Flats When Necessary

It's Part of Our Improved Flat Reclothing Service

Reclothing your flats won't stop poor carding, if your flat ends are badly worn. When you order flats reclothed, why not do a complete and thorough job? Our Fall River, Charlotte, Atlanta, and Greenville repair shops are better equipped than ever before to give you the following reclothing service:

1. Reclothe your flats.
2. Supply new flat chains for any make of card.
3. Last, but not least, remill your flats, when necessary.

Try this improved repair service and notice the difference in card performance.

PRODUCTS AND SERVICES

Card Clothing for Cotton, Wool, Worsted, Silk, Rayon and Asbestos Cards and for All Types of Napping Machinery. Brusher Clothing and Card Clothing for Special Purposes. Lickerin Wire and Garnet Wire. Sole Distributors for Platt's Metallic Wire, Lickerins and Top Flats Reclothed.

ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

Fall River*†‡ Worcester*‡ Philadelphia*†‡ Atlanta†‡ Greenville*†‡
Charlotte†‡ Dallas†‡ (Textile Supply Co.)

**Factory †Repair Shop ‡Distributing Point*

"Knitting quality fundamental in building hosiery sales..."

states ***EARL O'ROURKE****, Hosiery Buyer, Scruggs-Vandervoort-Barney, St. Louis*

"Style leadership, color selection and ample variety to meet customers' needs are all essential in building a successful hosiery department. Yet none are more fundamental than the quality of the knitting. For knitting quality is the key to lasting customer satisfaction on which a successful operation depends"... says Mr. O'Rourke.

That's why so many leading mills throughout the world always safeguard the quality of their merchandise by standardizing on the use of

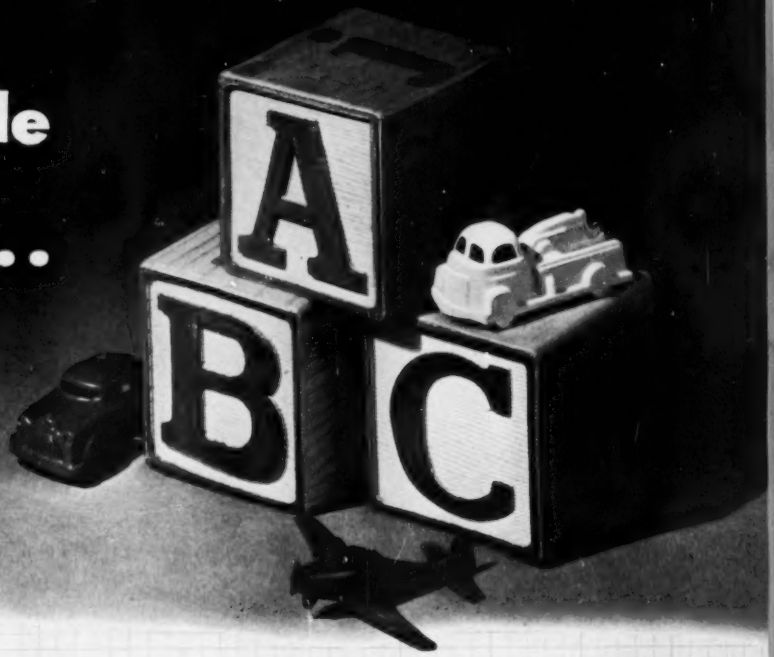
TORRINGTON

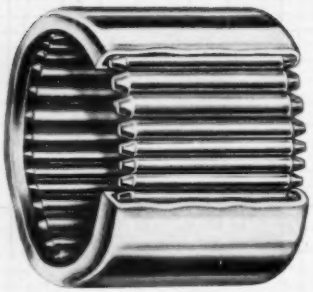
SPRING BEARD NEEDLES · SINKERS · DIVIDERS · SPLIT DIVIDERS

THE TORRINGTON COMPANY, Torrington, Conn., U. S. A.
Established 1866

Branches: New York · Philadelphia · Chicago · Greensboro, N. C. · Boston · St. Louis
Toronto, Can. · *Pacific Coast Representative:* E. G. Paules, 1762 West Vernon Ave., Los Angeles 37, Calif. Broadgate House, 7-10 Eldon St., London E. C. 2, England

simple as . . .





Torrington Needle Bearings:

A. Simplify design. A hardened shaft to serve as the inner race, a simple bore housing and a Needle Bearing are all you need for efficient anti-friction performance.

B. Simplify machining. No complex housings or shoulders are required—just a straight bore machined to proper dimensions.

C. Simplify assembly. A fast arbor press operation seats the bearing by press fit . . . no spacers or retainers are needed to hold Needle Bearings in position.

Torrington Needle Bearings may well be the answer to *your* design and production problems. Our engineers will be glad to help.

THE TORRINGTON COMPANY

Torrington, Conn. South Bend 21, Ind.

District Offices and Distributors in Principal Cities of United States and Canada

TORRINGTON *NEEDLE* BEARINGS

NEEDLE • SPHERICAL ROLLER • TAPERED ROLLER • STRAIGHT ROLLER • BALL • NEEDLE ROLLERS

Short cut to lower-cost winding . . .

The WHITIN Automatic Bobbin Loader

for use with the Whitin-Schweiter Filling Winder

The economies which can be effected through the use of Whitin-Schweiter Automatic Filling Bobbin Winders are already well known to the textile industry. Today, even greater savings are assured when these winders are equipped with the new Whitin Automatic Bobbin Loader.

This new attachment consists of a large-capacity hopper from which an automatic supply mechanism delivers the empty bobbins to the winder units as they are needed. Various bobbins up to 10-1/8" length can be handled. By thus eliminating the time now required by the operator to refill the bobbin magazines on the winder units, major increases in filling production per operator are effected, with consequent reductions in cost per wound pound of yarn.

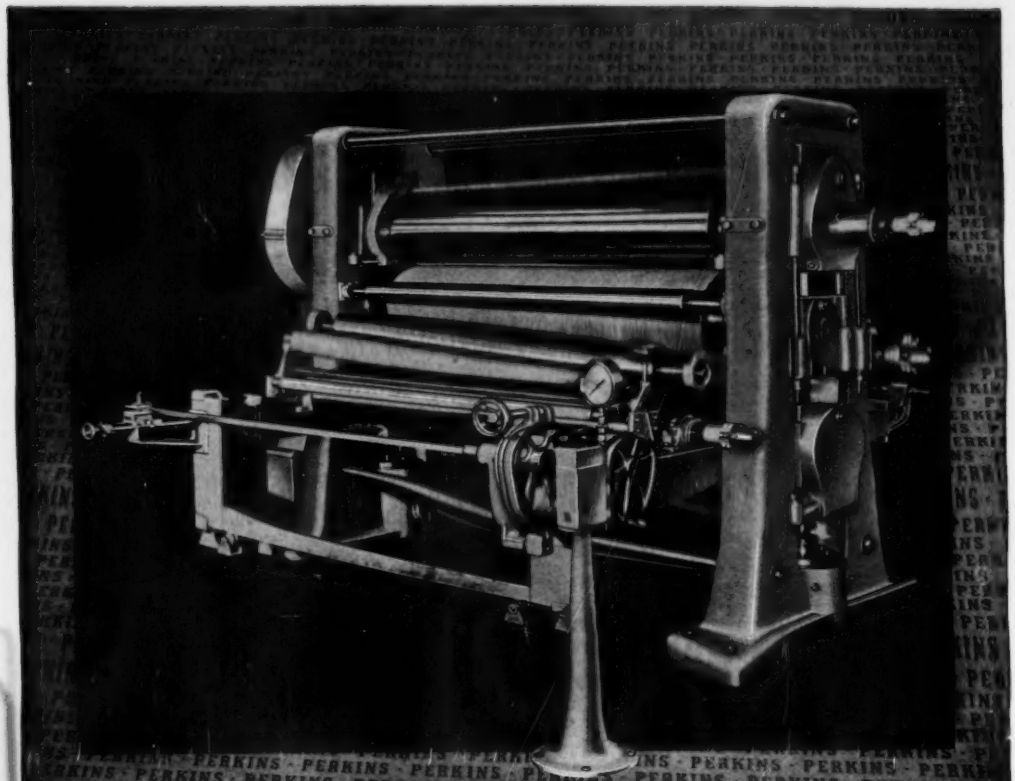
A careful analysis of winder tender job loads, with and without the bobbin loader, clearly proves that increases up to 100% in the winder unit assignment are possible on coarse to medium yarn counts. On most counts, the loader will pay for itself in a matter of months, and is an attractive investment even when winding the finest counts. Why wait any longer to take this short cut to lower cost winding?

The Whitin Automatic Bobbin Loader can be supplied with installations of new Whitin-Schweiter Automatic Filling Bobbin Winders or readily attached to machines now in use. Call or write your Whitin representative today!

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANSBURG, S. C • DEXTER, ME.



PERKINS POINTS WITH PRIDE

to this new three-roll 83" face 60-ton Hydraulic Rolling Calender. Top and bottom rolls, chilled iron. Intermediate roll, cotton. This calender is equipped with variable speed drive, pre-heating drum, cooling drum, three-bar tension group and a let-off which is adjustable laterally and horizontally.

B. F. PERKINS & SON, Inc.

HOLYOKE, MASS., U.S.A.

LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

Century 1 TO 400 H.P. MOTORS

Choose From These Many Types To Fit Your Job

DEPENDABLE CONSTRUCTION . . . Plus
PROPER SELECTION MINIMIZE SHUTDOWNS

Century Electric Company is celebrating its 50th year in the electrical industry.

It's easy to select the proper electric motor for your job from Century's complete line — from 1/6 to 400 horsepower. A wide range of types and kinds are available to satisfy all popular requirements. They are carefully designed, built and tested to assure maximum performance throughout their long life.

Here are examples of Century's line of INTEGRAL HORSEPOWER motors.

TYPE SC—Open Drip proof General Purpose Motor. Meets the needs of most installations where operating conditions are relatively clean and dry.

TYPE SC—Splash proof. Supplies protection where plants must be washed down. Keeps out all falling or splashing liquids—rain, snow, sleet, etc.

TYPE SC—Totally Enclosed Fan Cooled. Protects against dusts, mist, oil, fog. Inner frame protects vital parts of the motor, seals out harmful matter.

TYPE SC—Explosion proof. Protects life and property in atmospheres charged with explosive dusts or gases.

TYPE SR—Wound Rotor. Open Construction. Ideal for applications requiring low starting current with high starting torque, reversing or adjustable speed.

TYPE SR—Wound Rotor Splash proof. Same electrical characteristics as motor shown above. In addition, gives adequate protection against falling and splashing liquids.

Single Phase

TYPE RS—Repulsion Start Induction, Open Construction, Single Phase Brush Lifting Motor. Combines high starting torque with low starting current.

TYPE RS—Splash proof. Same advantages as open construction, plus protection against splashing and falling liquids.

TYPE CSH—Capacitor Start Induction, Single Phase Motor. Suitable when high starting torque with normal starting current is satisfactory.

TYPE CSH—Splash proof. Same advantages as motor shown above, plus protection against falling and splashing liquids.

Direct Current

TYPE DN—Direct Current Motors. Suitable for use where direct current is available, or its use desirable.

TYPE DN—Direct Current, Splash proof.

TYPE SY—Synchronous. Suitable for continuous operation at a uniform load for power factor correction.

In addition to a complete line of integral horsepower motors, Century offers fractional horsepower motors, gear motors, generators, AC and DC motor generator sets.

For a long life of satisfactory performance, specify Century motors for all your electric power requirements.

CENTURY ELECTRIC COMPANY, 1806 Pine Street, St. Louis 3, Missouri • Offices and Stock Points in Principal Cities

A CARD IS NO BETTER THAN ITS

CARD CLOTHING

That's why a relatively small investment in Tuffer Card Clothing gives such a handsome return. Its uniform, precise construction permits the carder to make the most of his skill and get full production from the carding machines.

Tuffer is the proved card clothing . . . proved in woolen and cotton mills throughout the industry. Specify it on your next order . . . let it prove itself on your cards.

HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C.

Branches: Philadelphia, Pa. and Blanco, Texas *Direct Representation in Canada* A-2

TUFFER CARD CLOTHING

IMPROVES PRODUCTION ALL ALONG THE LINE

RELIANCE V★S DRIVE ®

"Drive by RELIANCE" means *PEAK PRODUCTION* at *LOWEST COST* on any textile range!

There are good reasons why so many modern textile range drives are engineered by Reliance! Take the advantages inherent in the Reliance V★S Drive, add the Reliance know-how of over 30 years of specialization in planning range drives, and the result is always *peak production at lowest cost.*

Operating from A-c. circuits, the *All-electric* Reliance V★S Drive, offering quick, smooth starting and stopping and regulation of speed and tension can be adapted to any requirements. Consult a Reliance Application Engineer *early* in your consideration of new equipment or your modernization of existing equipment! Write for Bulletins 311 and D-2101.

Sales Representatives in Principal Cities

RELIANCE ELECTRIC AND ENGINEERING CO.

"Motor-Drive Is More Than Power" • 1085 [illegible]

 For more information, write direct or use Reader Service post card.

A MESSAGE TO AMERICAN INDUSTRY

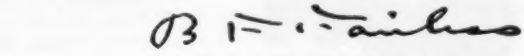
"This is more than a shortage . . . this is an emergency.

Every pound of your scrap is needed, NOW !"

"THE STEEL INDUSTRY is currently operating at more than 100% of rated capacity—turning out well over 2 million tons of steel per week. This record high production—every ton of which is in urgent demand—cannot be kept up unless we get more scrap from every potential source. For without your scrap we cannot produce enough steel. Today, every ton of steel turned out requires a half a ton of scrap for its production. That's why scrap—more scrap—is so urgently needed, and needed right away.

"The fact we have to face today is that steel mills are operating on a hand-to-mouth basis as far as scrap is concerned. Some mills are working on only a two-day supply of scrap. We already have had to shut down steel-making furnaces for lack of scrap.

"That's why we are asking you to strain every effort to get more scrap out of your plants and yards and on its way to the mills . . . to search out the scrap that doesn't come to market in normal times. You'll find this "dormant" scrap in obsolete equipment, tools and machinery that you haven't used for years . . . overlooked in your storage sheds . . . or rusting away in a junk pile in some forgotten corner. It's there. Turn it in at once—*so we can turn out the steel you need.* We can't do it without your help."



President, United States Steel Corporation

USS

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UNITED STATES STEEL

When you 'go gunning' for high costs . . . .

SET YOUR SIGHTS ON FRICTION!

GULF PERIODIC CONSULTATION SERVICE
CAN HELP YOU BRING MAINTENANCE COSTS DOWN

Every year friction puts its hand in U. S. industry's pocket to the tune of two billion dollars—for repairs, lost production time, and reduced plant efficiency.

You can reduce the "take" of friction in your plant by adopting Gulf Periodic Consultation Service. Through this co-operative plan you get year-round effective help on lubrication and maintenance problems—and on any other problem that involves petroleum products, such as cutting oils, quenching oils, fuel oils, rust preventives, petroleum solvents, waxes, and special process oils.

Scores of plants in every industry credit Gulf Periodic Consultation Service with practical assistance to operating and maintenance personnel in reducing costs straight down the line. The knowledge and experience of Gulf technologists can be profitably applied to many of your operating and maintenance problems.

Call your nearest Gulf office today for further information on this advanced service plan. Or mail the coupon below.

GULF

Gulf Oil Corporation · Gulf Refining Company
Room 719, Gulf Building, Pittsburgh, Pa. TW

Please send me, without obligation, a copy of the booklet "Gulf Periodic Consultation Service."

Name.....
Company.....
Title.....
Address.....

For more information, write direct or use Reader Service post card.

[redacted]

Huntsville saw the advantages to be gained in terms of increased production and reduced costs through a modern power system.

[redacted]

They called in their Westinghouse representative early in their plans to get the benefit of Westinghouse experience with similar installations.

[redacted]

Do what hundreds of other textile firms are doing. Have Westinghouse work with your engineers and the machine builder in applying equipment to your plant.

[redacted]

Whether it's more dependable and efficient electrical distribution like this, a new drive, better servicing, or simply the application of a piece of electrical equipment to do a tough job—Westinghouse has the answer.

Modernized Power System saves money, stops plant-wide shutdowns

If an outdated power system is slowing your production and boosting power bills, here's an idea. M. Loewenstein & Sons had this problem in their Huntsville Manufacturing Company's cotton mill. So they had Westinghouse help design a new system and supply modern apparatus. Here are the results:

In six months: One minor stoppage

With their old system, every electrical storm caused power stoppages throughout the Huntsville plant. Now however, any one electrical fault affects *only 5% of the mill.* In the first six months, with the new system there was just one power shortage. It affected only a small portion of the mill and lasted only 10 minutes!

Cuts $1,000 from monthly power bill

By distributing power more efficiently, the new system cuts the load demand from 5300 kw to 5100 kw. Figuring power cost at 1¢ per kwhr, this saves about $350.00 per month. Even more important, the power factor has been boosted from 80% to 88%—eliminating a $600.00 monthly penalty charge for low power factor.

Makes maintenance safe and easy

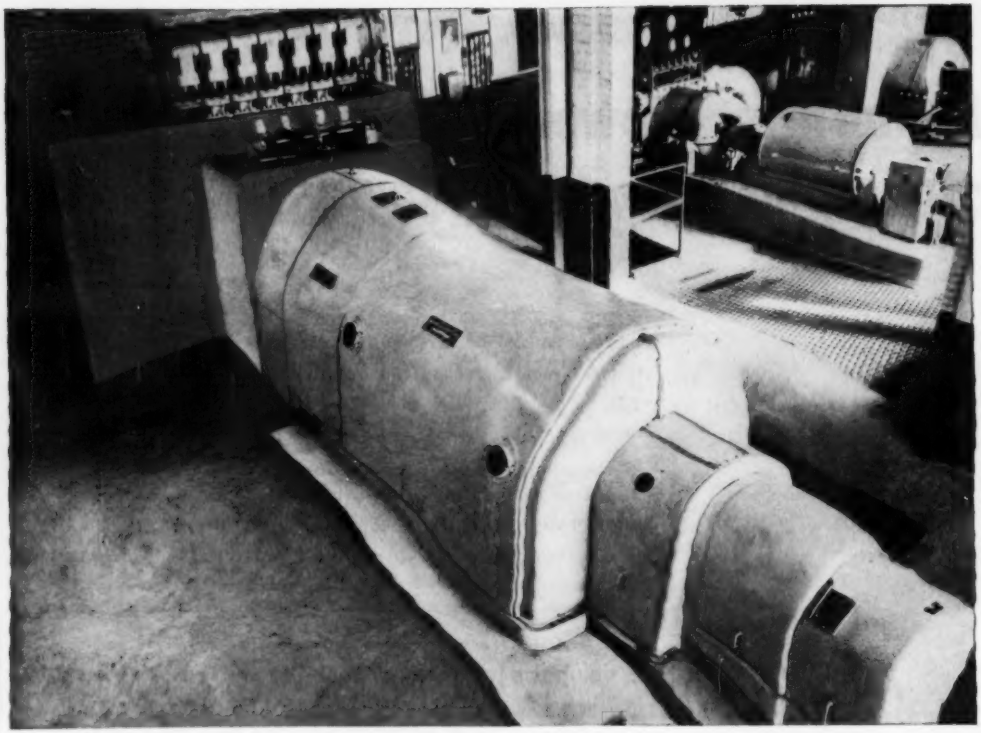
Dangerous open switchgear and overhead power lines have been eliminated in the new system. Power conductors now pass through underground ducts, with one phase wire in each duct. If trouble occurs, a ground-detector immediately tells the maintenance man which conductor has faulted. There's no more laborious searching.

Call Westinghouse for system help

If an outdated power system is costing you money, have your engineers get in touch with your Westinghouse office. And if you're planning a new plant, have Westinghouse help design an efficient system right from the beginning. For more information now, write for B-4045, "Industrial Plant Distribution Systems". Westinghouse Electric Corp., Box 868, Pittsburgh 30, Penna. J-94876

You can be sure... if it's Westinghouse

EQUIPMENT FOR TEXTILE PRODUCTION



How Rock Hill and Worthington Balanced Steam and Power

During its fast growth, Rock Hill Printing and Finishing Company, Rock Hill, South Carolina, has made extensive changes in the power plant.

Since 1929 electrical demand has greatly increased. Also, plant process has called for large quantities of steam at 90-100 psi and at 15 psi pressure.

When a new 150,000 lb-hr boiler was installed, another Worthington 5000-kw non-condensing extraction-type turbine generator was also installed. This latest Worthington unit operates on steam at 230 psi, 575 FTT, and automatically extracts steam at 100 psi, exhausting at 15 psi back pressure.

The unit has sufficient flexibility between extraction and back pressure to handle variations in flow requirements and to carry an electrical load varying from 3000 up to an anticipated 5000 kw.

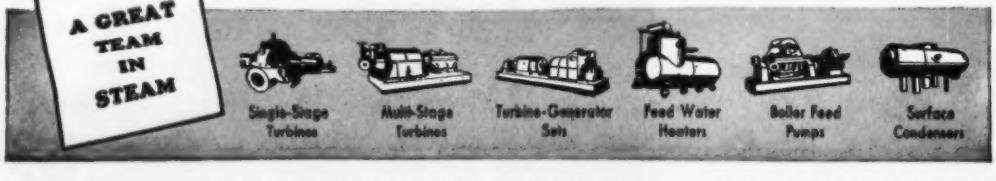
By purchasing a *Worthington* unit, Rock Hill also benefits from unit responsibility for design, assembly and performance.

Worthington builds turbine-generator sets in sizes up to 10,000 kw and in all types. For detailed proof that *there's more worth in Worthington*, call our nearest office or write to Worthington Pump and Machinery Corporation, Steam Turbine Division, Wellsville, New York.

WORTHINGTON

STEAM TURBINE GENERATORS

T.I.7



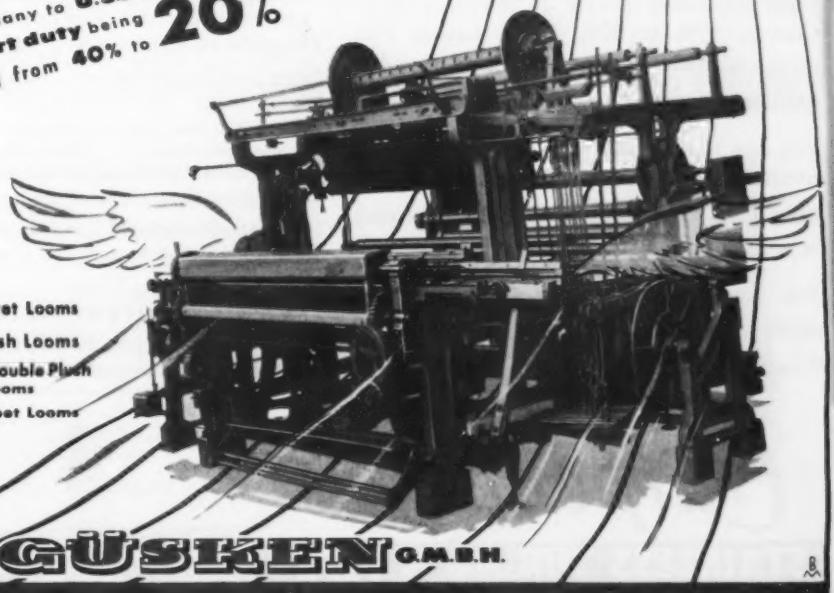
Original GÜSKEN looms often copied but never equalled

JGD

Now again

ORIGINAL GÜSKEN LOOMS

from Germany to **U.S.A.**
the **import duty** being
reduced from **40%** to **20%**



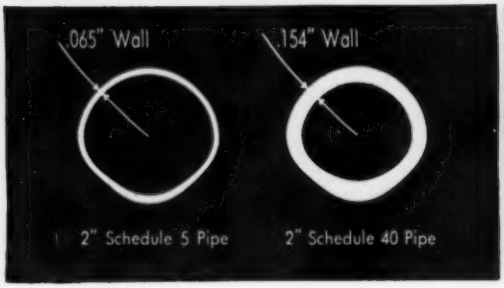
Double Velvet Looms
Double Plush Looms
Combined Double Plush and Wire Looms
Double Carpet Looms

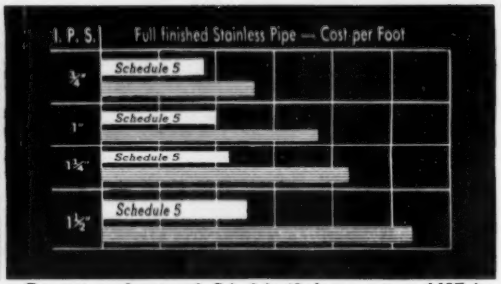
JEAN **GÜSKEN** G.M.B.H.

MASCHINENFABRIK u. EISENGIESSEREI · DÜLKEN / RHLD. GERMANY

how *Carpenter* is helping industry get more stainless pipe

—even today, when it's tough to get!





Comparison of costs with Schedule 40 shows savings of 10% to 45% with *Schedule 5*. Additional savings on costs for valves, fittings, etc. are also possible.

What Carpenter *Schedule 5* Pipe Is—

Its LIGHT WALL gives *more feet of pipe* for every pound of Stainless Steel. Cost is 40% to 50% lower. Larger I.D. increases flow area and permits use of a smaller pipe size.

You now have a way to help us improve the availability of Stainless Pipe for essential uses. And you can do it at a terrific saving in your costs.

You can hook up *Schedule 5* Pipe with existing lines of tubing or heavier wall pipe, Schedules 10 and 40.

For most jobs Carpenter *Schedule 5* Stainless Pipe handles the working pressures with a good margin of safety. Any working pressure up to 150 psi is handled by this pipe. In pipe sizes under 1½", higher pressures are frequently used.

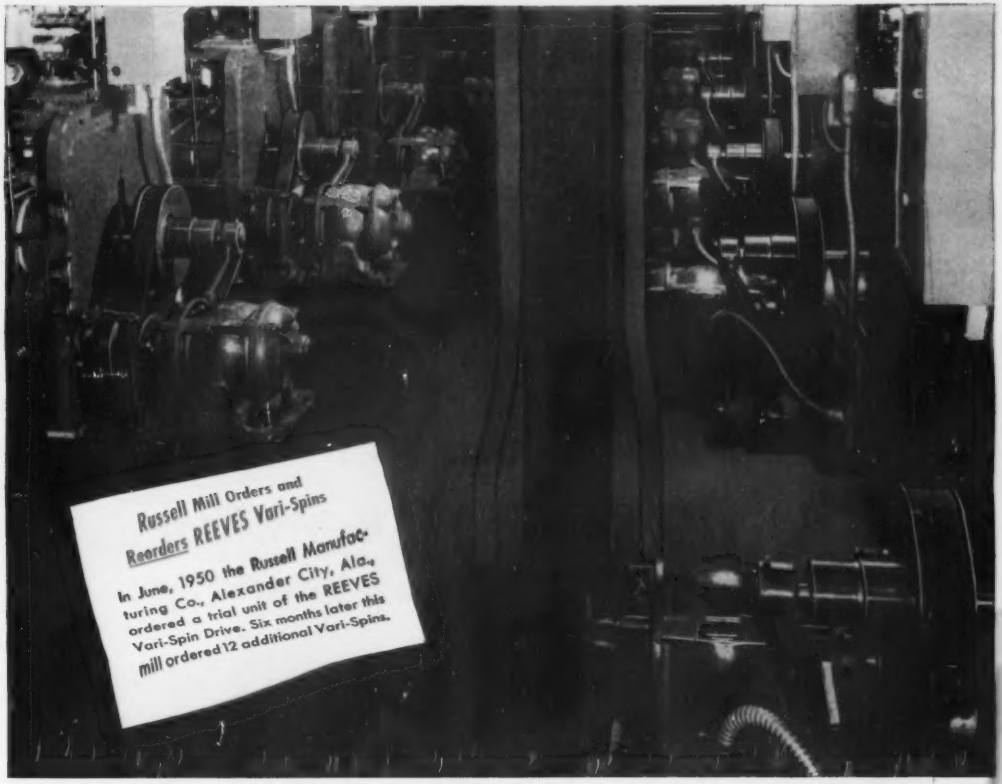
More Stainless Pipe for essential uses is possible, even under today's conditions. To get the full story, call your nearest Carpenter Stainless Tubing Distributor. Or, write for a copy of the new "*Schedule 5* Data Sheets". We will be glad to send you a set.

THE CARPENTER STEEL COMPANY
Alloy Tube Division, Union, N. J.
Export Department: Carpenter Steel Co., Reading, Pa.—"CARSTEELCO"

Carpenter

STAINLESS TUBING & PIPE

• guaranteed on every shipment


Russell Mill Orders and Reorders REEVES Vari-Spins
In June, 1950 the Russell Manufacturing Co., Alexander City, Ala., ordered a trial unit of the REEVES Vari-Spin Drive. Six months later this mill ordered 12 additional Vari-Spins.

With REEVES Vari-Spin, you change spinning speeds instantly, accurately—without stopping

Install Vari-Spin and get all these benefits:

1. The exact speed for every yarn set—even to a fraction of an rpm.
2. Immediate and positive speed changes—in 30 seconds or less—without stopping frame, and without downtime for pulley changes or adjustments. No need to maintain stock of pulleys and belts for speed changes.
3. Stepless speed adjustment anywhere within 2½ to 1 range.
4. Use your present motors—or any standard, ball-bearing, straight-shaft motors.
5. Drive requires only one belt.
6. Compactness—Vari-Spin nests into narrow aisles. Quickly and easily installed and maintained.

Write for complete information contained in Bulletin No. W 76-N.

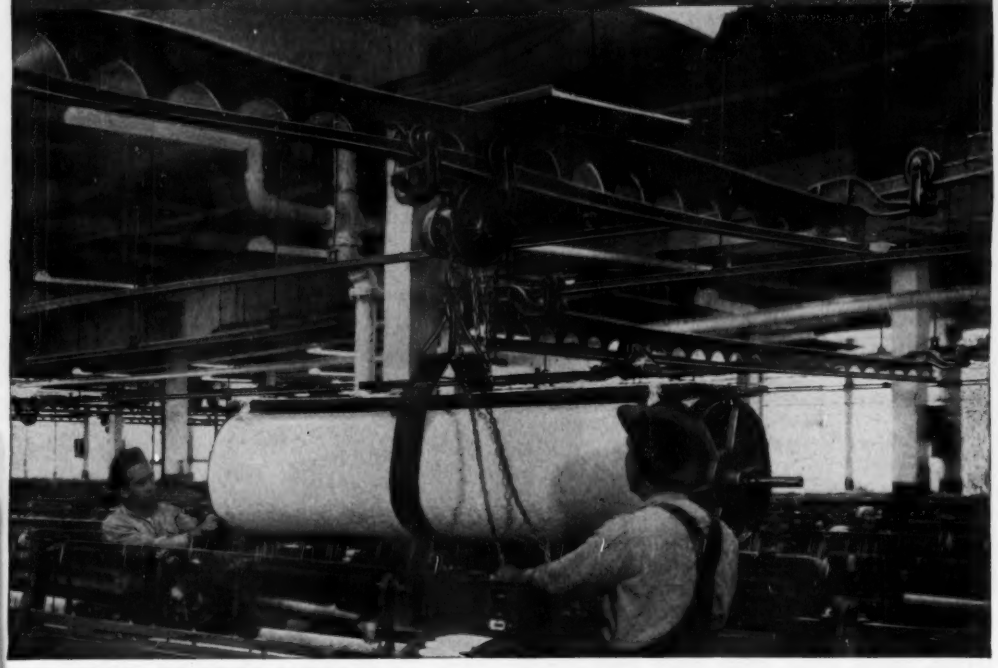
accurate · variable
REEVES Speed Control

TURN OF SCREW CHANGES SPEED. Slightest speed change is instantly secured and positively maintained by turning single speed shifting screw. REEVES Drive—incorporating operating principle proved in 300,000 installations—is so positive that return to previous cylinder speed within fraction of rpm is secured.

REEVES PULLEY COMPANY · COLUMBUS, INDIANA
Recognized leader in the specialized field of speed control engineering.

The Fast, Safe, Efficient Way to

HANDLE 24" AND 30" BEAMS IN THE WEAVE ROOM



Because of large economies resulting, textile mills are rapidly going from the old 18" standard to 24" and 30" diameter beams. This means heavy beams with harness—often running 1000 to 1500 pounds—far too cumbersome to handle manually with old-time floor dollies. It also means sizes larger than shaft alleys in most weave rooms will accommodate.

The only natural and obvious solution to the handling of such large beams in the weave room is the use of simple, inexpensive Cleveland Tramrail cranes, or track and switch systems. Thereby, heavy beams can be easily moved overhead to any loom by one man. Aisle widths need not be changed. The same crane that places a beam in a loom removes and transports the cloth.

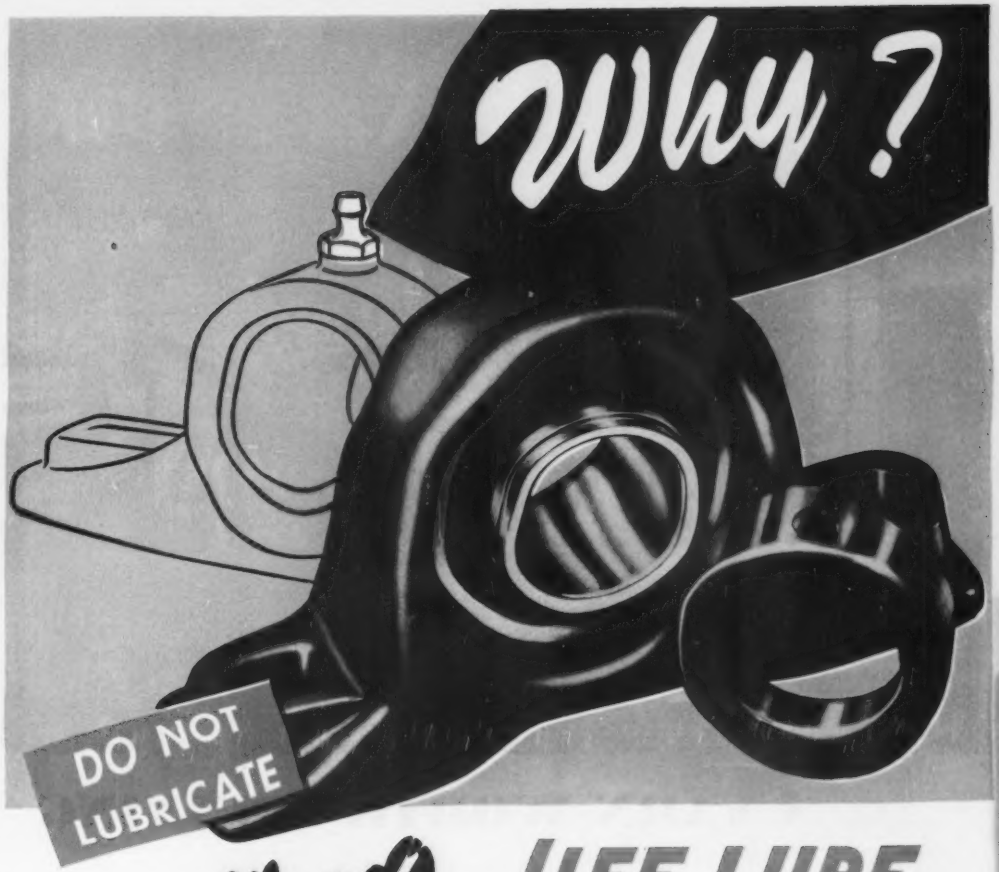
Efficient storage racks can be used with Cleveland Tramrail systems, permitting orderly storage of beams, three or more high. Any beam can be selected without disturbing others and delivered directly to any loom without rehandling.

Safety is improved tremendously when Cleveland Tramrail is provided. Hernias become practically non-existent. Injury to beams is greatly reduced. Floor damage is minimized.

GET THIS BOOK!
BOOKLET No. 2006. Packed with valuable information. Profusely illustrated. Write for free copy.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
8453 EAST 287th ST., WICKLIFFE, OHIO

CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT



Wood's **LIFE LUBE**

PERMANENTLY LUBRICATED

BALL BEARING PILLOW BLOCKS

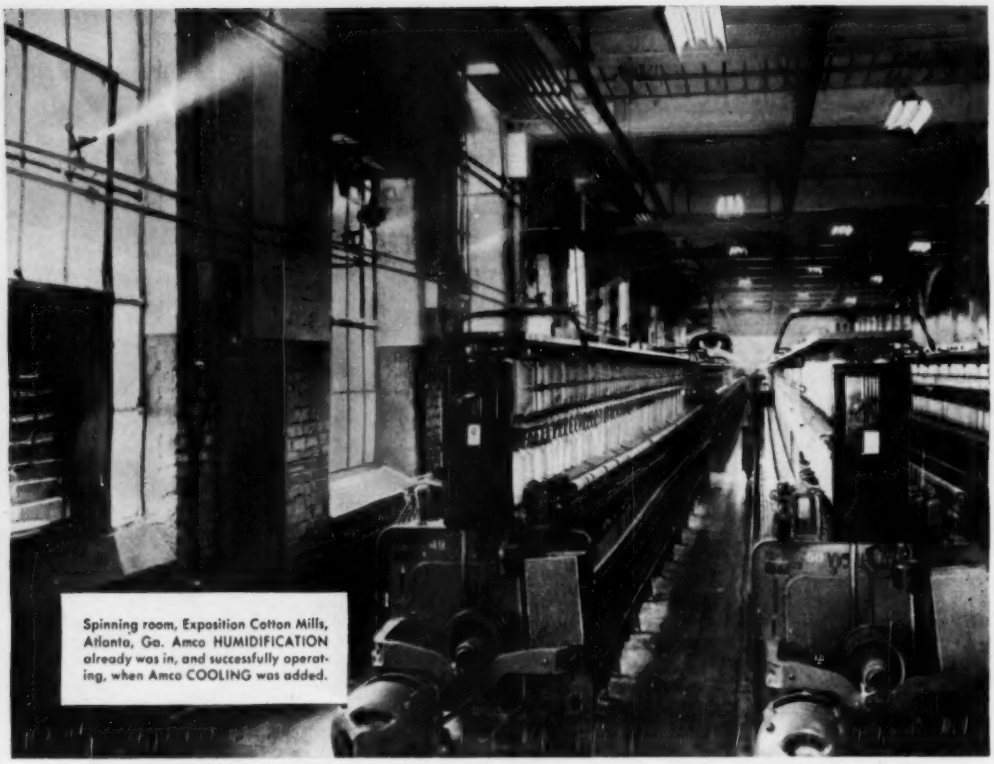
Now, you don't have to bother with troublesome, time-consuming, expensive Pillow Block lubrication which increases maintenance costs and often permits faulty lubrication that materially reduces bearing life.

There's a sure way to be safe even if your Pillow Blocks are located in out-of-the-way, inaccessible places. Specify and install Wood's LIFE-LUBE Ball Bearing Pillow Blocks. They're equipped with MRC Bearings permanently lubricated at the factory with a thoroughly tested and approved ball bearing lubricant. No further lubrication is required — lubricant and periodic lubrication costs are eliminated.

Be *safe* and *sure* with LIFE-LUBE — positive, permanent lubrication at no extra cost. Ask your Wood's Industrial Distributor or write us for Bulletin 194.

T. B. WOOD'S SONS COMPANY, CHAMBERSBURG, PENNA.

Branches: BOSTON, MASS., NEWARK, N. J., DALLAS, TEX., CLEVELAND, O.



Spinning room, Exposition Cotton Mills, Atlanta, Ga. Amco HUMIDIFICATION already was in, and successfully operating, when Amco COOLING was added.

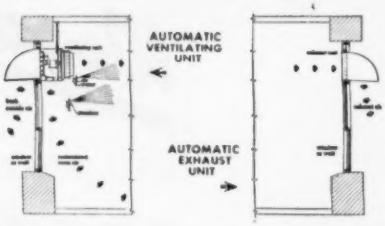
A YARN WORTH SPINNING

Here's a modern "*see*" story — with important advantages for you in better quality, increased output, reduced waste.

You can *see for yourself* the advantages of Amco humidification . . . in correct regain, even yarn counts, reduced waste, improved output and quality, greater worker comfort and efficiency.

But do you know how easily you can add COOLING to humidification, with a ductless system? You discard nothing and make only a modest addition to your present humidification system. Add evaporative cooling room by room as you need it. Modify it any time it is convenient.

The cooling effect of evaporating twelve pounds of water per hour is equivalent to one ton of refrigeration. That's the measured result of evaporative cooling in one hour in a given area. For example, in cotton weaving at 80% relative humidity an Amco ductless evaporative cooling system can economically produce an indoor temperature approximately 7 degrees above the outside wet bulb temperature.



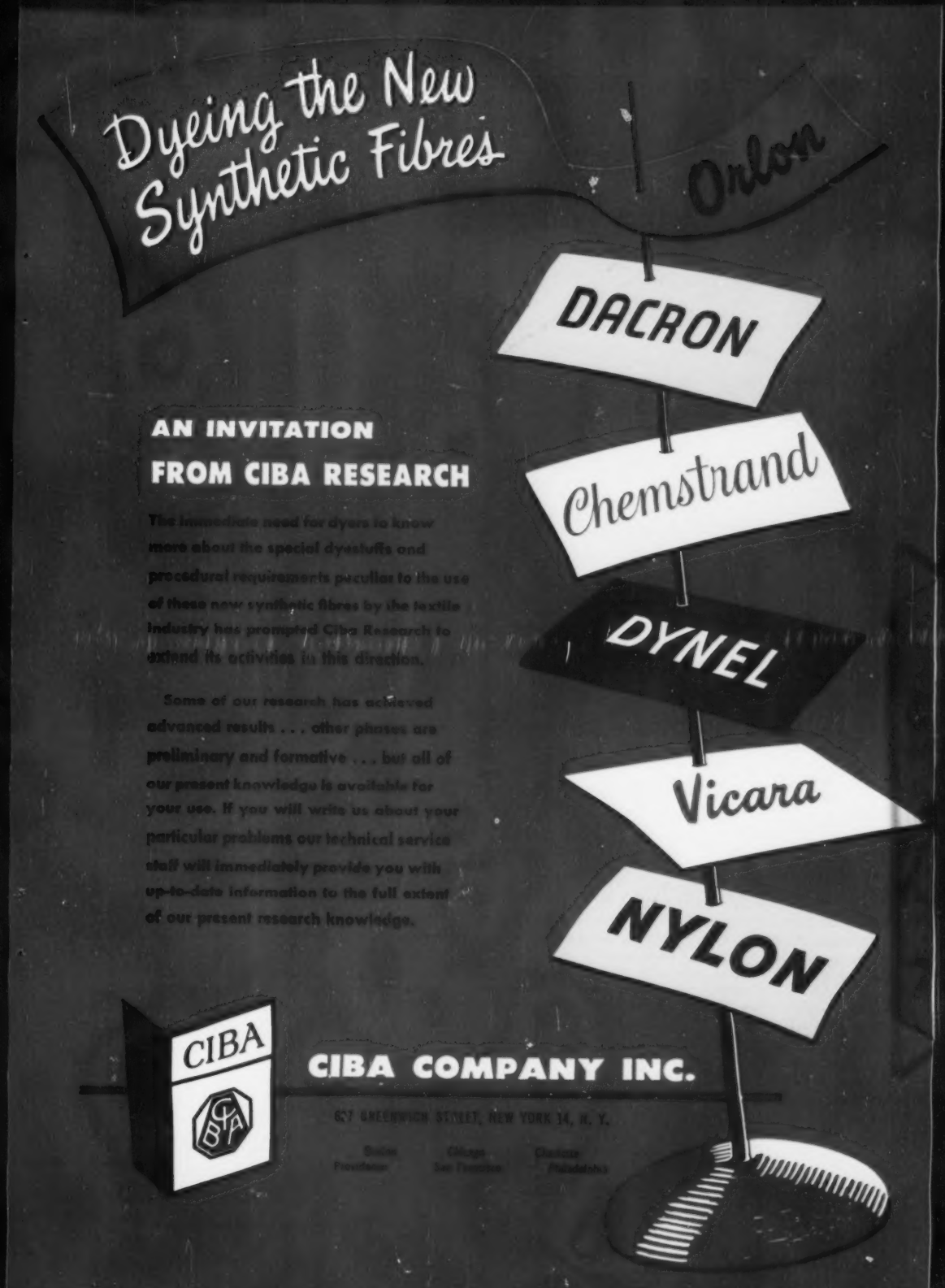
Ventilating units draw in a controlled amount of fresh air, additional atomizers provide extra evaporation for absorbing excess heat. Controlled vents exhaust spent air and heat. Automatic temperature controls cover winter and summer conditions. Atomizers are self-cleaning. Controls are extremely responsive.

Amco offers both ductless and duct systems of humidification and cooling. An Amco engineer will give you unbiased advice on the system best suited to your requirements.

AMCO HUMIDIFICATION and COOLING

AMERICAN MOISTENING COMPANY, AFFILIATED WITH GRINNELL CO., INC., PROVIDENCE, R. I. • BOSTON • ATLANTA • CHARLOTTE

For more information, write direct or use Reader Service post card.


Dyeing the New Synthetic Fibres
Orlon
DACRON
Chemstrand
DYNEL
Vicara
NYLON
AN INVITATION
FROM CIBA RESEARCH
The immediate need for dyers to know more about the special dyestuffs and procedural requirements peculiar to the use of these new synthetic fibres by the textile industry has prompted Ciba Research to extend its activities in this direction.
Some of our research has achieved advanced results . . . other phases are preliminary and formative . . . but all of our present knowledge is available for your use. If you will write us about your particular problems our technical service staff will immediately provide you with up-to-date information to the full extent of our present research knowledge.
CIBA
CIBA COMPANY INC.
627 GREENWICH STREET, NEW YORK 14, N. Y.

How Much Per Traveler-Pound?

The true test of a traveler is the number of pounds of top quality yarn which can be spun or twisted with it before it wears out. The more yarn produced, the lower your cost per traveler-pound.

Millmen who keep a sharp eye on production costs always judge travelers on this traveler-pound rating. And that's why so many choose Victor Travelers for spinning or twisting.

Victors consistently cost less per traveler-pound for two reasons. First, because there are no better travelers made, by any test of quality and uniformity. Second, because Victor Service Engineers, all mill-trained men, can quickly grasp your special problems, and come up with the right answer.

They can not only recommend the *right* traveler, but can often make other suggestions for improving your quality and production, —whether you are running conventional fibers, synthetics, or blends.

Plan now to talk to a Victor man about your costs per traveler-pound. Write, wire, or phone the nearest Victor office . . . for prompt service.

•

Keep a Step ahead with

VICTOR Ring Travelers

VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I. . . . . 20 Mathewson St. . . . . Tel. Dexter 1-0737

GASTONIA, N. C. . . . . 358-364 West Main Ave. . . . . Tel. 5-0891

The Tail that Wags the Dog

Keep this thought in mind. On the average painting job, labor represents 80% of your total cost. The paint itself represents only 20%. But the paint is actually the tail that wags the dog. It's what your painter can or cannot do with a paint that cuts down or runs up your painting costs.

That is why we suggest a simple test that shows how Barreled Sunlight really cuts painting costs. Just take a gallon of Barreled Sunlight and a gallon of any other paint and thin each according to directions on the cans. First thing you'll notice is that Barreled Sunlight gives you more paint ready for the brush.

But of even greater importance, see what your maintenance painter can do with each *on the wall*. You'll see that in any given period of time he can get more yardage — can work much faster and easier . . . with Barreled Sunlight. And what's more, you'll notice that after drying, Barreled Sunlight hides better...looks brighter, cleaner...even after just one coat.

Project these evident savings . . . savings in the amount of paint you buy and savings in man hours to put it on . . . in terms of a complete job. You'll agree that Barreled Sunlight . . . famous for over 50 years for its quality and proven economy . . . is the paint to use, *always*.

BARRELED SUNLIGHT PAINT COMPANY
20-H Dudley St., Providence, R. I.

Barreled Sunlight *Paints*

In whitest white or clean, clear, pleasing colors, there's a Barreled Sunlight Paint for every job

IT ALWAYS COSTS MORE NOT TO PAINT!

For more information, write direct or use Reader Service post card.

NO ROOM FOR "Trial and Error"

when you're buying VALVES

You're right the *first* time when you install Powell Valves

Powell makes valves precisely engineered to suit each and every industrial flow control service. Powell Engineers will be glad to help you select the *right* valves to meet *your* requirements.

Gate, Check, Globe and Y Valves, in Bronze, Iron, Steel and Corrosion-Resisting Metals and Alloys

Quality fine throughout "The Line"

Fig. 1793. Large 125-pound Iron Body, Bronze Mounted Gate Valve for low pressure steam, oil, water and gas services. Sizes 2" to 30", incl.

POWELL

The WM. POWELL CO., 2525 Spring Grove Ave., P. O. Box 106, Station B, Cincinnati 22, Ohio

"Tycol Acylkup keeps bearings running cool... does not emulsify with water"

That's right! Tycol Acylkup Grease withstands heavy unit pressures . . . resists emulsification with water. It is easily applied by grease gun or central system.

Further, Tycol Acylkup Grease contains a high grade paraffin base cylinder oil that steps up bearing efficiency and assures increased bearing life. Protection against wear is long-lasting. Your nearest Tide Water Associated Office will be glad to give you complete information. Call or wire today.

TYCOL

INDUSTRIAL LUBRICANTS

Boston • Charlotte, N. C. • Pittsburgh
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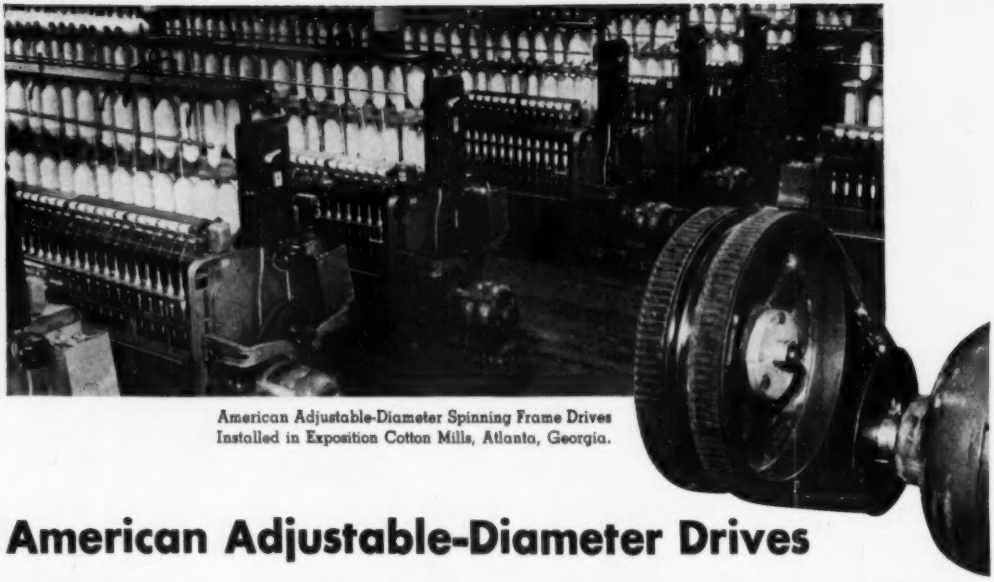
Tulsa • Cleveland • San Francisco

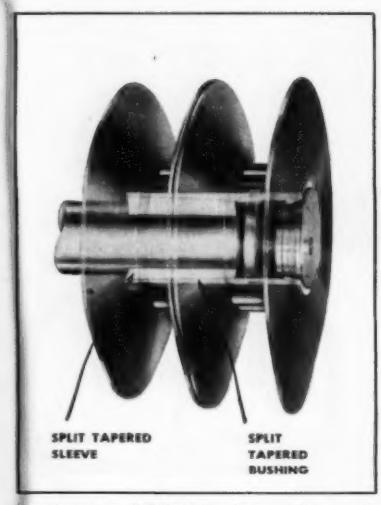
TIDE WATER ASSOCIATED OIL COMPANY

SEND FOR A FREE COPY OF "TIDE WATER ASSOCIATED LUBRICANIA"



American Adjustable-Diameter Spinning Frame Drives Installed in Exposition Cotton Mills, Atlanta, Georgia.

American Adjustable-Diameter Drives improve output for Exposition Cotton Mills



Phantom view of "R" Section Sheave. Also available in "A", "B", "C", and "Q" Section Sheaves.

● The management of Exposition Cotton Mills is to be congratulated on their new, modern plant. They know cotton—and they know machinery.

They know that the productivity of a machine depends on the proper speed—the *exact* speed for maximum *production* and highest *quality*.

To provide the proper speed, they chose infinitely variable American Adjustable-Speed Drives, including the unique Double-Taper Wide-Range Adjustable-Diameter driving sheaves, Wedgtite Companion Sheaves, Wedgbelts, and Adjusto-Slide Motor Bases.

The exclusive "double-taper" hub construction of these adjustable sheaves assures long, quiet, trouble-free operation. The sheaves are easy to mount because of their split-tapered bushings. They are quiet-running and permanently easy to adjust because their split-tapered sleeves expand to lock the flanges into "solid" sheaves during operation. Thus all peening and fretting of moving parts is eliminated and speed changes remain easy to make.

Follow the lead of this and other progressive cotton mills. Get complete information on these drives by writing for a copy of the American Double-Taper Adjustable-Diameter Drives Bulletin.

The American Pulley Company 4226 Wissahickon Avenue, Phila. 29, Pa.

AMERICAN Adjustable-Diameter Drives

BUY AMERICAN—THE LEADER IN POWER TRANSMISSION FOR 55 YEARS

YOU CAN BE **SURE**.. IF IT'S

Westinghouse

REPORT:

"According to a study of weave room fires by the Associated Factory Mutual Fire Insurance Companies for the period from 1935 to 1945, 38.8 percent of the electrical fires in weave rooms were caused by loom motor starters."

HERE'S YOUR ANSWER, TEXTILE INDUSTRY!

Westinghouse now offers a new *Gasketed* Lint-Tight Loom Motor Starter . . . designed specifically to reduce weave room fire hazards. And it's the first starter of its kind on the market.

Explosion and fire caused by lint and dust reaching starter contacts can now be a thing of the past. The new Westinghouse *Gasketed,* Lint-Tight Loom Motor Starter keeps lint and dust out because the enclosure is completely sealed. A special Neoprene gasket forms a positive, continuous seal between the box and cover. Pressure from the cover clamp makes sure every crevice is filled with the pliable Neoprene gasket . . . positive assurance that combustible elements cannot enter the enclosure. Thus, this cause of fire is prevented *before it* can happen.

What's more, you get these exclusive features, too! Positive Disc-Type, Bimetallic Overload Protection . . . "De-ion" Arc Quenchers . . . Quick-Make, Quick-Break rotary handle mechanism that cannot be kicked or bumped "ON" or "OFF" inadvertently. Your nearby Westinghouse representative can give you all the facts. Ask him for a copy of B-5256, or write Westinghouse Electric Corporation, Box 868, Pittsburgh 30, Pennsylvania. J-30038

Westinghouse

LINT-TIGHT

LOOM MOTOR STARTERS

For more information, write direct or use Reader Service post card.

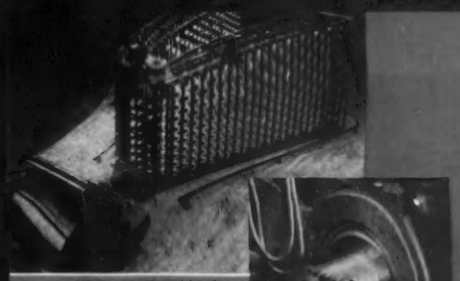
"...from little acorns grow."

1931 1951

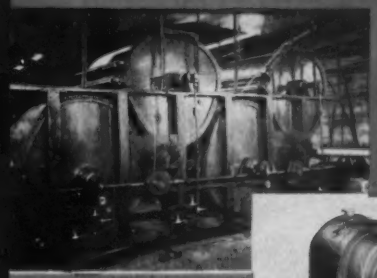
In this our twentieth anniversary year, may we express to our friends in the textile industry, our heartfelt thanks and our humble appreciation for your friendship, understanding and loyal support that has made our growth possible. To you we are sincerely grateful.

Meadows
MANUFACTURING COMPANY
ATLANTA

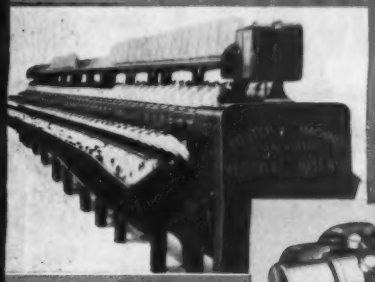
QUALITY...BACKED BY A DESIRE TO PLEASE



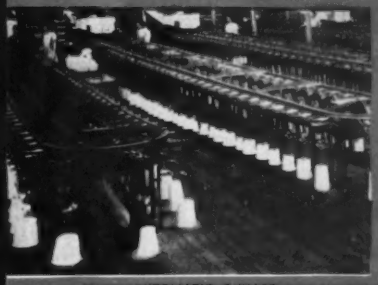
HIGH SPEED WARPER
Beam shaft equipped with Fafnir Radial shielded-type bearing.



CYLINDER SECTION HIGH SPEED SLASHER
SAOL Pillow Block for combinations of moderate to heavy loads . . . fixed and floating types.



WINDER
Fafnir Mechani-Seal Wide Inner Ring Bearing with Self Locking Collar.



AUTOMATIC CHILLER
Fafnir Radial Type Bearings, available in standard shaft sizes and with various arrangements of seals and shields.

TURNING POINTS
to closer quality control
in Winding, Warping and Slashing

Cleaner, faster production and lower maintenance costs aren't the only advantages of ball-bearing-equipped winding, warping and slashing machines. Better quality control is "in the cards" too. For example, on Fafnir-equipped high speed winders, records show more uniform package density . . . on warpers, even length warps are assured. On high speed slashers, there's less strain on the warp when cylinders and creels are mounted on Fafnir Ball Bearings.

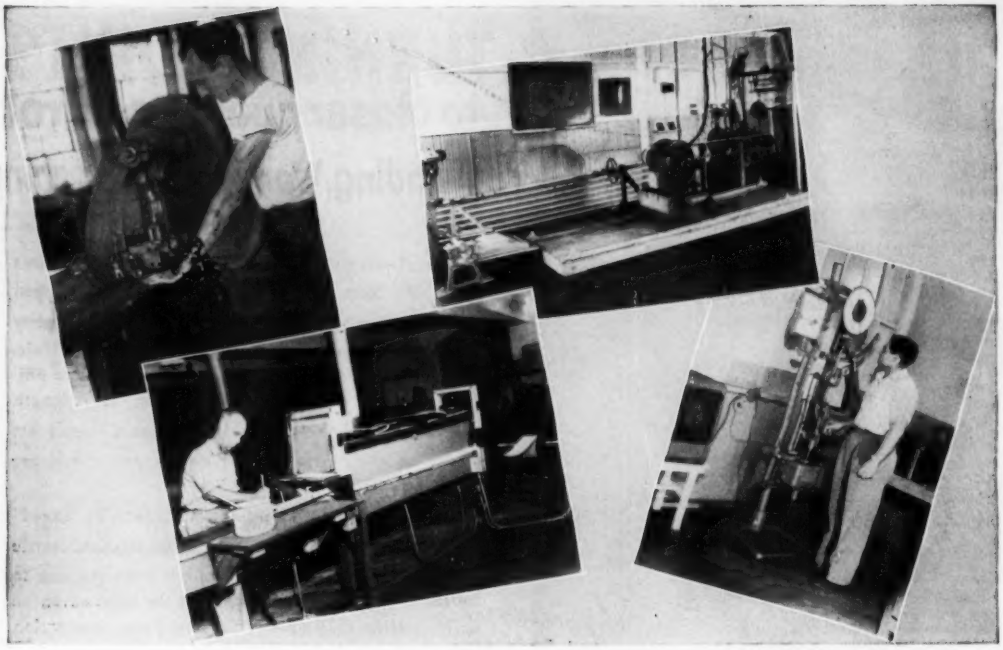
There's a Fafnir Ball Bearing or Complete "Packaged" Unit for every turning point, for every standard textile machine, for every textile operation from opening to finishing. Each of these bearings is the most advanced design, such as the Fafnir Wide Inner Ring construction with self-locking collar . . . easiest of all bearings to install. Check all the advantages . . . send for descriptive catalog. The Fafnir Bearing Company, New Britain, Connecticut.

Other FAFNIR UNITS for Winding, Warping and Slashing

- Cylinder Unit for Rotary Steam Joint Adaptation . . . Cohoes Slasher
- Cylinder Unit for Rotary Steam Joint Adaptation . . . Saco-Lowell Slasher
- Size Roll Unit Saco-Lowell Slasher
- Slasher Creel Stand Unit
- Rear Cone Unit . . . Saco-Lowell Slasher
- Front Cone Unit . . . Saco-Lowell Slasher
- Pressure Roll Unit
- Squeeze Roll Unit

FAFNIR
BALL BEARINGS

MOST COMPLETE LINE IN AMERICA



HERE'S WHY!

Here's why it's superior! Why "Southern" belting out-performs all others!

Southern Belting Company has consistently, throughout 61 years, kept abreast of developments and changes in the industry which it serves. By adapting its production methods to specific needs of the Textile Industry, "Southern" flat leather belting HAS ALWAYS BEEN MODERN!

Modern laboratory testing of leather samples insures quality of materials. Sample testing of finished belting insures quality of product. Stretch, not elasticity, removed. Separation of laps and plies eliminated by patented infra-red drying process.

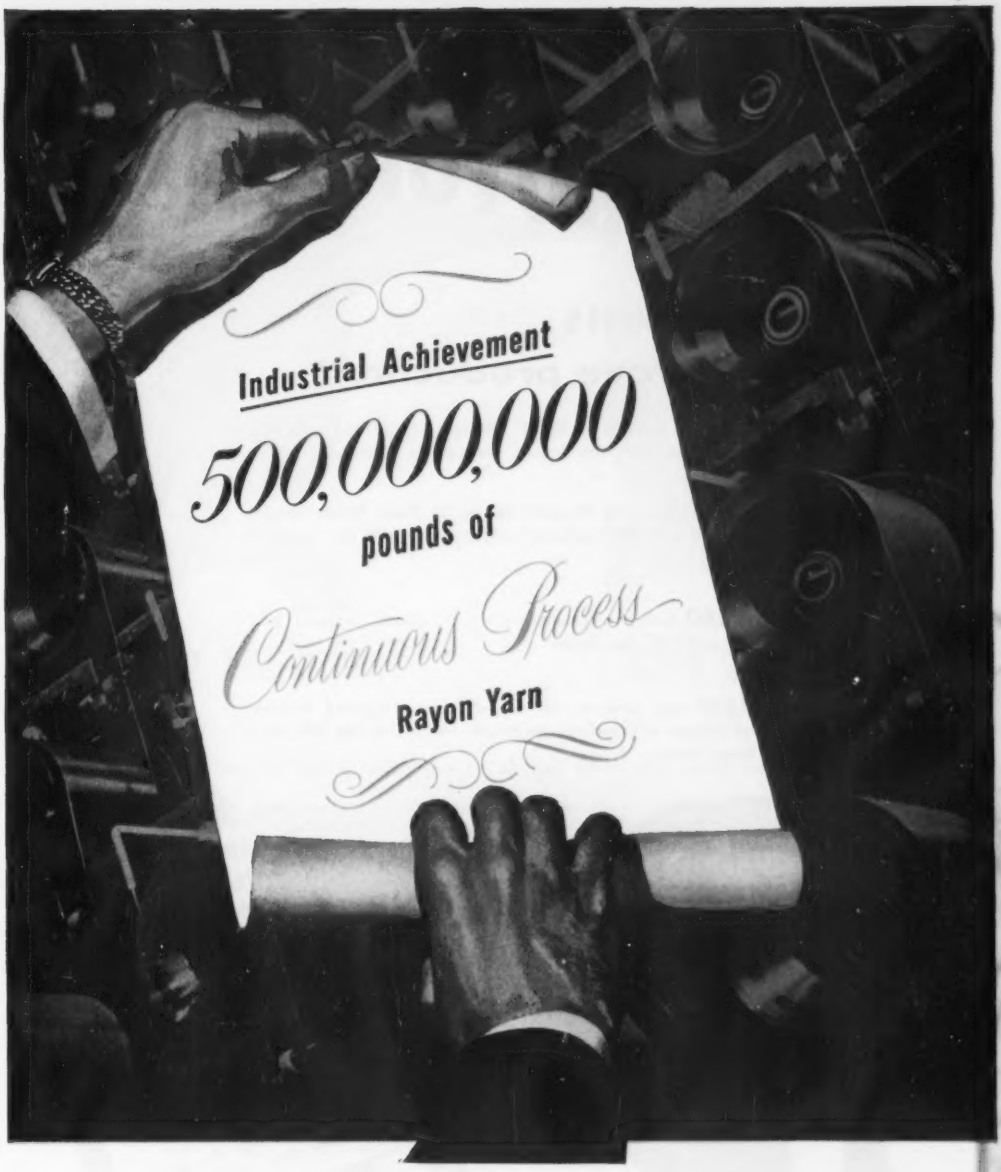
"Southern" belting is *unconditionally guaranteed*, beyond requirements of industry to meet the most rigid performance specifications in existence.

MODERN IN PRODUCTION! MODERN IN PERFORMANCE!

SOUTHERN Belting COMPANY

236 FORSYTH STREET, S. W. ATLANTA 2, GEORGIA

THE "SOUTHERN WAY" IS THE MODERN WAY



★ *In 1939,* Industrial Rayon Corporation delivered its first pound of "Continuous Process" rayon yarn. *Early in 1951,* we hit the half-billion mark: 500,000,000 pounds had left our plants. It is difficult to imagine the miles of textiles...the millions of tires... made more perfect by these half-billion pounds of superlative yarn! From its very inception, I.R.C.'s revolutionary "Continuous Process" pushed the rayon industry ahead several decades. The yarn it produced set a new standard of quality for mills, cutters, converters throughout the entire world. Producers in Great Britain, France, Italy and other foreign countries leaped to adopt it. Today, 12 years after its introduction, I.R.C. "Continuous Process" rayon yarn remains unsurpassed!

IRC
INDUSTRIAL RAYON CORPORATION
Cleveland, Ohio
500 Fifth Avenue, N. Y. 18, N. Y.

 For more information, write direct or use Reader Service post card.

HERE'S HOW
BAHAN MOTOR DRIVES

help cut costs and improve production!

DESIGNED to provide a highly efficient loom-driving unit that operates shift after shift with smooth, dependable precision.

MOUNTED directly to the loomside, Bahan Motor Drives keep a rigid alignment with the crankshaft and operate with less vibration and friction.

ASSEMBLED before shipment, each unit comes complete and ready for immediate installation.

INSTALLED with ease on all model looms. Tapered bushing eliminates danger of bending crankshaft. Ideal for use with new NEMA frame motors.

SPECIFICATIONS
BAHAN MODEL "C" MOTOR DRIVE

- Two ball thrust bearings
- Tapered bushing
- Grease-lubricated bearings
- Complete with hand wheel (or brake wheel)
- Choice of 8-pitch or 10-pitch gears
- Complete with new heavy-duty motor

BTM

BAHAN TEXTILE MACHINERY CO., Inc.

DESIGNERS AND MANUFACTURERS OF RELIABLE TEXTILE MACHINERY FOR OVER 30 YEARS

Greenville, South Carolina

Finishing headaches?

Quick cure!

Some finishers take a pill to get rid of their on-the-job headaches.

The smart ones get in touch with Monsanto for Catalyst AC, for in hundreds of finishing plants, millions and millions of yards of goods have been resin-treated with the help of Catalyst AC. Catalyst AC cures the resin as fast or faster than other catalysts. In a customer test on an 80 x 80 cotton fabric, for example, we found resin retention fully comparable to that obtained with other catalysts, but the hand was softer and wrinkle-resistance superior. Here are the actual data:

% Urea Resin Applied	Catalyst	% Resin Retention	Stiffness (Gurley)	Wrinkle-Resistance
8%	AC	85%	4.7	137°
8%	DAP	86%	4.9	131°
8%	Competitive Catalyst	84%	5.0	130°

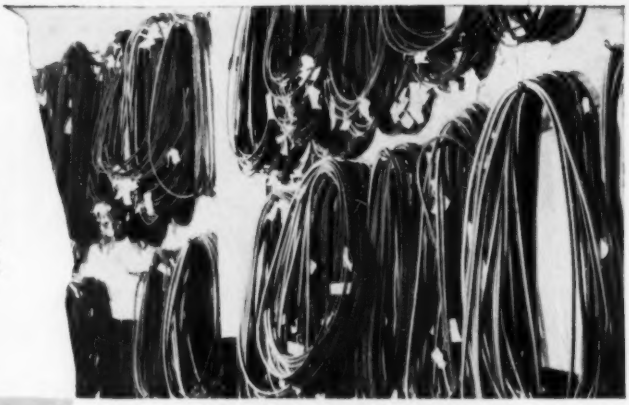
In addition to these *performance* advantages, think of the advantages in your mill. With Catalyst AC, as you know, a urea-formaldehyde bath (36% solids) is stable for 24 or more hours—not only a convenience, but in some mills a real money-saving plus. Of course Catalyst AC is completely compatible with the usual softeners and penetrants.

For more information or technical help at your plant, please write MONSANTO CHEMICAL COMPANY, Textile Chemicals Dept., Everett Station, Boston 49, Mass.

MONSANTO
CHEMICALS—PLASTICS

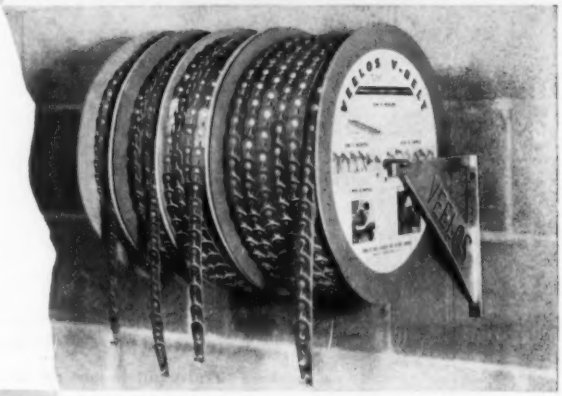
Why carry this Costly Inventory?

When you switch to Veelos—the adjustable v-belt—you end for all time the storage problem, the inventory control problem and the "frozen investment" problem that come with carrying this expensive, space-wasting stock of endless v-belts.



4 reels of *VEELOS* is your Complete Inventory

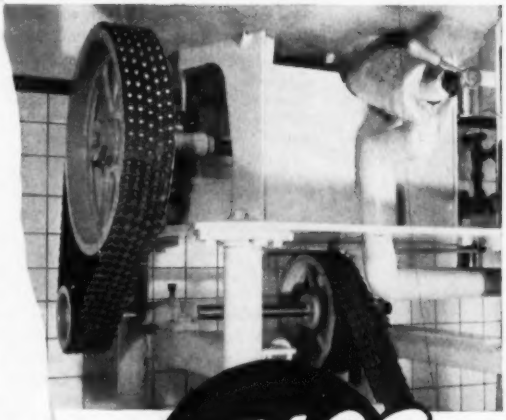
With just these 4 reels of Veelos you can take care of *every* v-belt need in the O, A, B and C widths—these 4 reels replace up to 316 sizes of endless v-belts . . . and you have the right size belt when you need it. There's no storage or control problem—inventory costs are at a minimum.



and *VEELOS* provides Peak Machine Production

Vibrationless, full power delivery—simple, easy adjustment to maintain uniform tension on all belts—quick installation (unnecessary even to dismantle outboard bearings) these are Veelos advantages that mean maximum production.

We have a copy of the **VEELOS DATA BOOK** for you—write today and we'll send you this complete story on Veelos—the adjustable v-belt.



VEELOS
THE LINK
V-BELT

ADJUSTABLE TO ANY LENGTH • ADAPTABLE TO ANY DRIVE

Made in all widths in three types: regular, oil-proof, static conducting. Also double V in A and B. Packaged on reels in 100-foot lengths. Sales engineers in principal cities; over 350 distributors throughout the country. VEELOS is known as VEELINK outside the United States.

MANHEIM MANUFACTURING & BELTING COMPANY • MANHEIM, PENNA.

Stainless must go a long way, too!

To meet the demands of national defense and civilian needs, stainless must go a long way. That's why, now, more than ever—if you use stainless—use it wisely and efficiently.

Stainless is a name given to a broad list of grades and finishes—therefore, careful selection of the best available materials for your job is of prime importance. Here Crucible, a pioneer in the development of stainless steels, can help you get the most out of your share of stainless stocks through the unparalleled experience of our metallurgists and stainless fabricating specialists.

And when you can't get the grade of stainless you need, Crucible technical personnel can give you sound advice on the best available materials.

Until the time when stainless is more freely available . . . stretch your supplies of stainless. To do this . . . make use of Crucible's wealth of stainless steel experience.

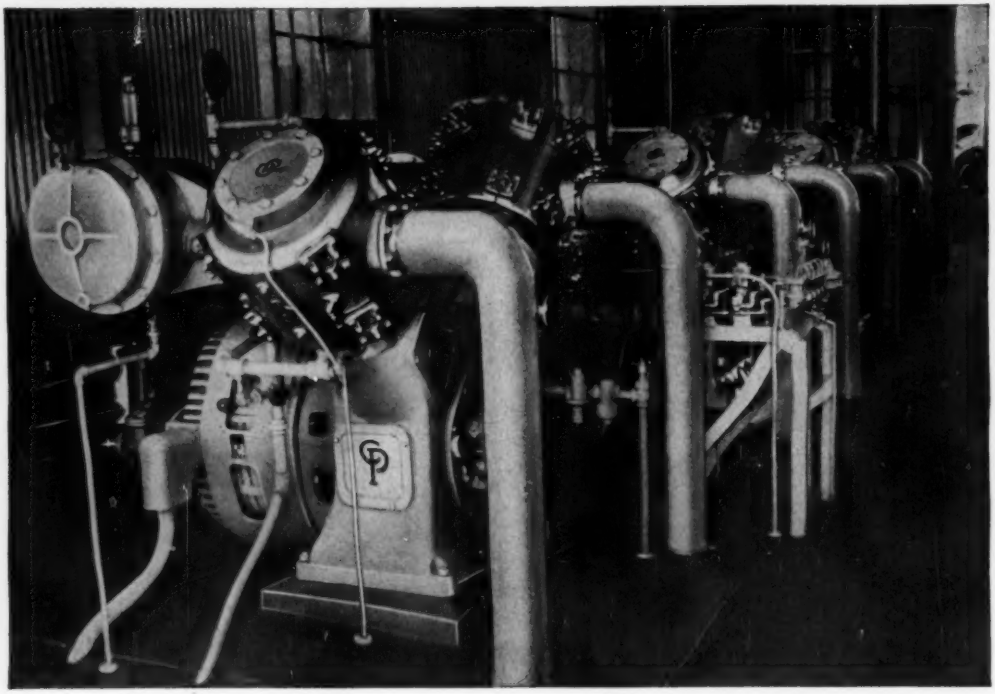
CRUCIBLE first name in special purpose steels

51 years of Fine steelmaking

STAINLESS STEELS

CRUCIBLE STEEL COMPANY OF AMERICA, GENERAL SALES OFFICES, OLIVER BUILDING, PITTSBURGH, PA.

STAINLESS • REX HIGH SPEED • TOOL • ALLOY • MACHINERY • SPECIAL PURPOSE STEELS



FOR HEAVY DUTY

COMPACT, EASILY INSTALLED TYPE Y COMPRESSOR

Where floor space is limited, and continuous, heavy duty service is required, the Type Y Compressor is ideal. Available with direct-connected, flange-mounted synchronous or squirrel cage motor.

The Type Y Compressor is easy and inexpensive to install, requiring only a simple foundation. No aligning or leveling is necessary.

CP features that assure high efficiency and low maintenance include large area Simplate valves, multi-step capacity regulation, effective inter-cooling, precision bearings and force-feed lubrication.

Built in sizes from 75 h.p. to 250 h.p., 501 c.f.m. to 1663 c.f.m.; available also with belted and coupled motors.

Write for Bulletin 766

CHICAGO PNEUMATIC TOOL COMPANY

General Offices: 8 East 44th Street, New York 17, N. Y.

PNEUMATIC TOOLS • AIR COMPRESSORS • ELECTRIC TOOLS • DIESEL ENGINES
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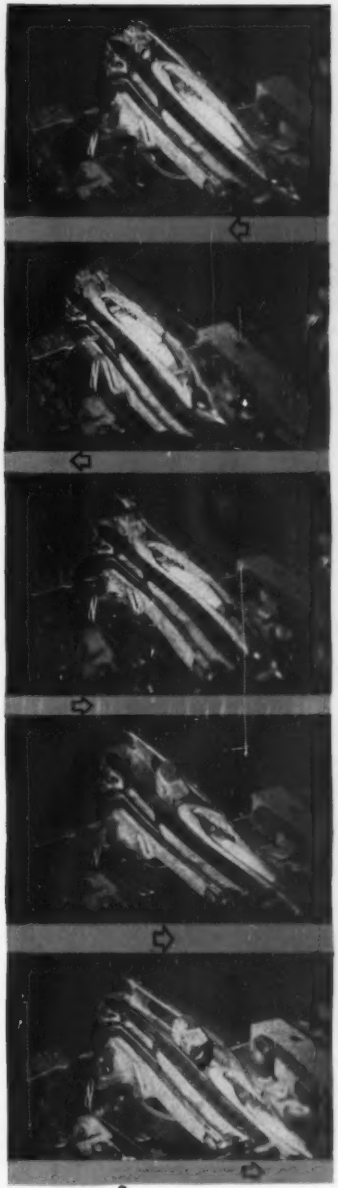
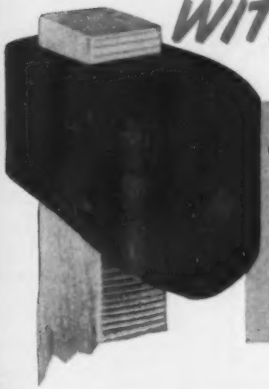


Follow-thru with Leather



Follow-thru action of

PICKMASTER PICKERS

assures swift, smooth shuttle flight

"Follow-thru is the secret of the hard, fast ball into the bleachers — *and the same holds true in the swift, straight flight of a shuttle across the raceplate.*

These "frozen-action" (stroboscopic) photographs — taken in 1/20,000th of a second on a Draper X2 Loom at 175 picks per minute! — prove that the **PICKMASTER** Leather Picker *does not bounce the shuttle!* Instead, it makes a perfect catch of the shuttle spur in the precision hole and throws the shuttle with a long sweeping follow-thru that carries it swifty and smoothly into the other box.

Leather does not retain and build up heat — shuttle spurs remain relatively cool and shuttles last longer. Construction is accurate, well balanced — picker and stick work as one. The "life saver" hole is literally a shuttle life saver, correct in bore and located to keep the shuttle nose down. The finish is smooth — cannot catch fine filament . . .

Follow-thru with Leather! Remember no substitute material can give you all these advantages, yet you need *all* of them to get top quality and high production.

The new catalog of G&K-DIXIE Textile Leathers proves with high speed photographs that it pays to Follow-thru with Orange Line Loom Leathers. Send for it.

100 YEARS OF SERVICE TO INDUSTRY
GRATON AND KNIGHT
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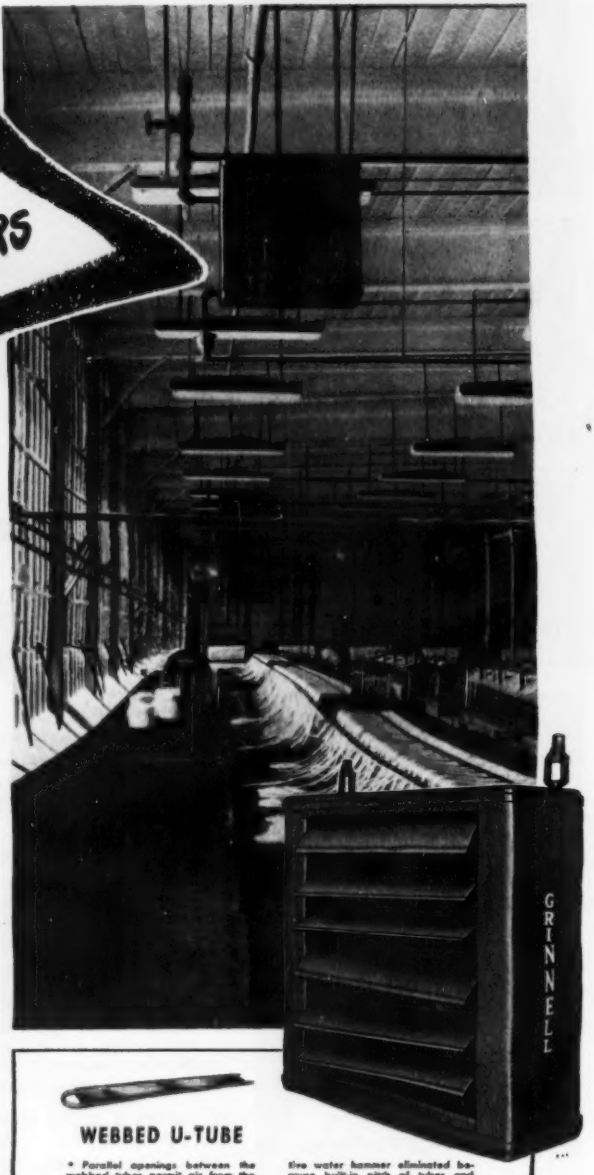
Pickmaster® Pickers

FAMOUS ORANGE® LINE TEXTILE LEATHER

GRATON & KNIGHT COMPANY, WORCESTER, MASS. • DIXIE LEATHER CORPORATION, ALBANY, GEORGIA *Affiliate*

For more information, write direct or use Reader Service post card.

MORE HEAT . . . LESS MAINTENANCE with TEXTILE THERMOLIERS



The record is clean! Whenever Textile Thermoliers have been installed in a mill, no matter how severe the conditions of lint and fly, the results have been the same . . . more heat, less maintenance.

The Textile Thermolier's special heating element is the answer. It consists of a series of webbed, pitched U-tubes parallel to one another and assembled into a single header. An extension of the web on the trailing side increases the heating area, while the absence of conventional fin edges minimizes the collection of lint, fly and dirt on the heating surfaces. Result: Textile Thermoliers stay cleaner, providing efficient heating with practically no servicing.

Avoid being caught "cold" next winter. Get all the facts on Thermoliers without delay.

WEBBED U-TUBE

- Parallel openings between the webbed tubes permit air from the fan to pass through and keep heating element clean.
- Safety and durability assured with leak-proof tube-to-header construction.
- Maximum capacity provided at all times and annoying and destructive water hammer eliminated because built-in pitch of tubes and internal cooling leg assures continuous drainage of condensate.
- Plain thermostatic trap, the simplest and least expensive kind of trap, made practical because of Thermolier's exclusive internal cooling leg.

GRINNELL

WHENEVER PIPING IS INVOLVED

GRINNELL COMPANY, INC., Providence, R. I. Warehouses: Atlanta • Billings • Buffalo • Charlotte • Chicago Cleveland • Cranston • Fresno • Kansas City • Houston • Long Beach • Los Angeles • Milwaukee • Minneapolis • New York Oakland • Philadelphia • Pocatello • Sacramento • St. Louis • St. Paul • San Francisco • Seattle • Spokane

For Sanforized fabrics don't settle for less:

Twitchell 7250 Oil gives you *all three advantages in one!*

SUPERIOR FIBER LUBRICATION . . . provides easy and uniform rearrangement of fibers during fabric pre-shrinking, assuring more uniform goods . . . eliminates sticking at the shoes.

FASTEST REWETTING . . . through high speed, uniform rewetting, you get increased production efficiency. For example, treating a 6 oz. untreated duck with a 3% solution of Twitchell 7250 reduces rewetting time from *5-10 minutes to only 15.2 seconds!* Rewetting ability is not affected by prolonged aging on fabrics or by finishing agents.

SOFT HAND . . . enables you to save on other finishing agents normally needed. In many cases Twitchell 7250 provides *all* the necessary softness.

In addition, this oil resists staining, yellowing, oxidation and rancidity . . . gives you the best rewetting buy on the market today. Save time, money . . . buy Twitchell 7250 today.

For a recommendation to fit your particular need, contact our Development and Service Department.

Other Twitchell Oils for other requirements. Select the one that best suits your conditions.

PRODUCT	FIBER LUBRICATION	REWETTING	SOFTNESS	STAINING
Twitchell 7250	Very Good	Fastest	Softest	None
Twitchell 7240	Excellent	Fast	Moderate	None
Twitchell 7231	Excellent	Medium	Slight	None

Emery *Twitchell Textile Oils*

EMERY INDUSTRIES, INC.
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PLANNED INTERFERENCE

BLOCKS HIGH COSTS!

With Baldwin-Rex Roller Chains on your drives, you won't be troubled with high maintenance and repair costs . . . production losses . . . due to premature chain failure. *Planned interference* protects you! Here's why:

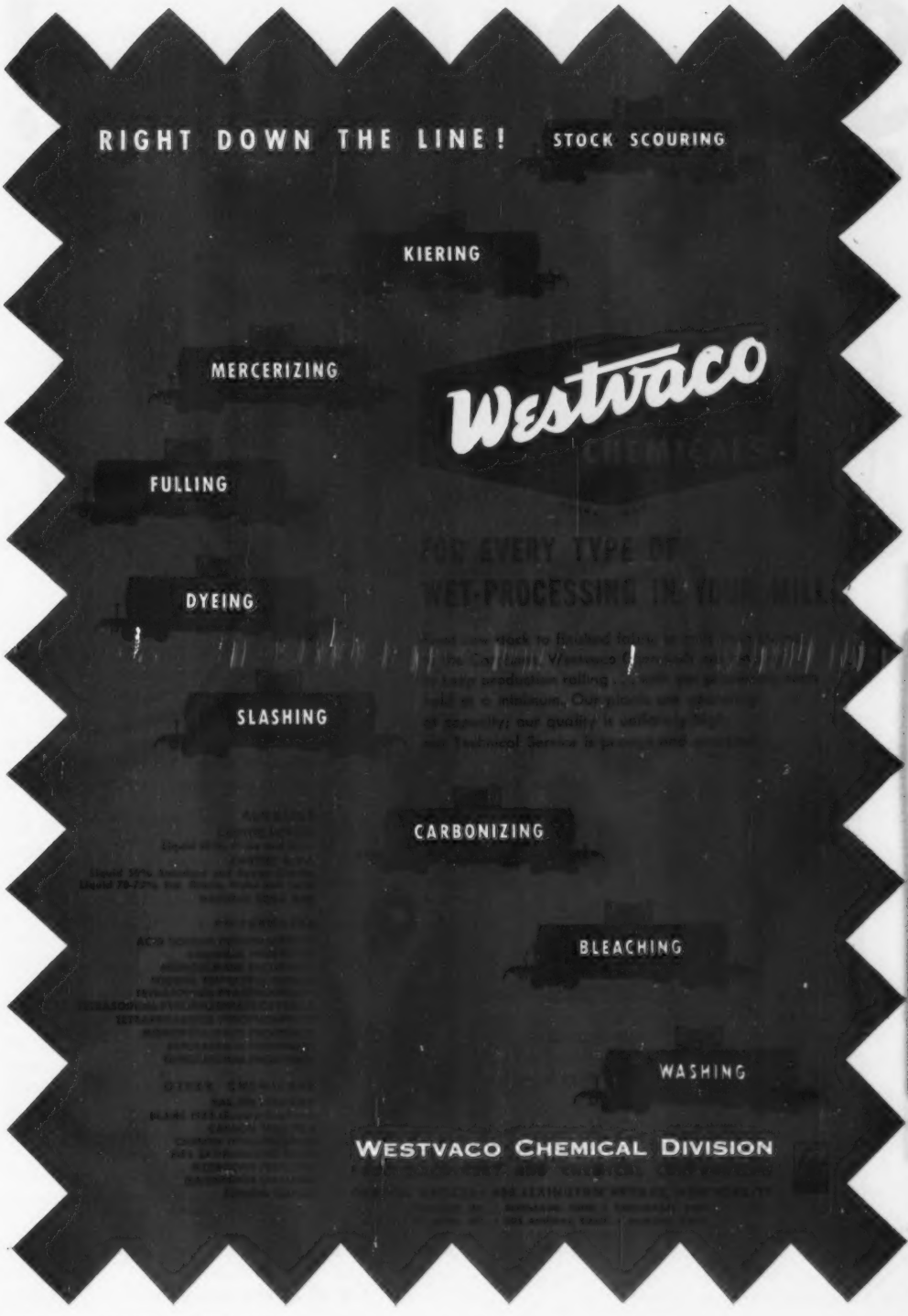
1 The press fit of pins and bushings in roller chain side plates materially determines length of chain life. Correct press fits prevent pins and bushings from turning in their side plates so that when chain flexes, a relatively broad surface of pin and bushing takes the wear. If a pin or bushing were to break loose and turn in the side plate, with each flexing of the links, wear would be concentrated on a small pin or bushing surface at the plate and materially shorten the life of the chain.

2 In Baldwin-Rex Chains, pins, bushings and side plates are built with *planned interference.* In other words, pins and bushings are actually designed to be a specified amount larger than the holes into which they are to fit. This assures a controlled press fit and prevents rotation of pin and bushings in side plates. It means longer, lower cost chain life to you!

Ask your Baldwin-Rex Field Sales Engineer to demonstrate *planned interference* with his sample kit. It's graphic proof of long life. Or, for details, write Baldwin-Duckworth Division of Chain Belt Company, 346 Plainfield Street, Springfield 2, Mass.

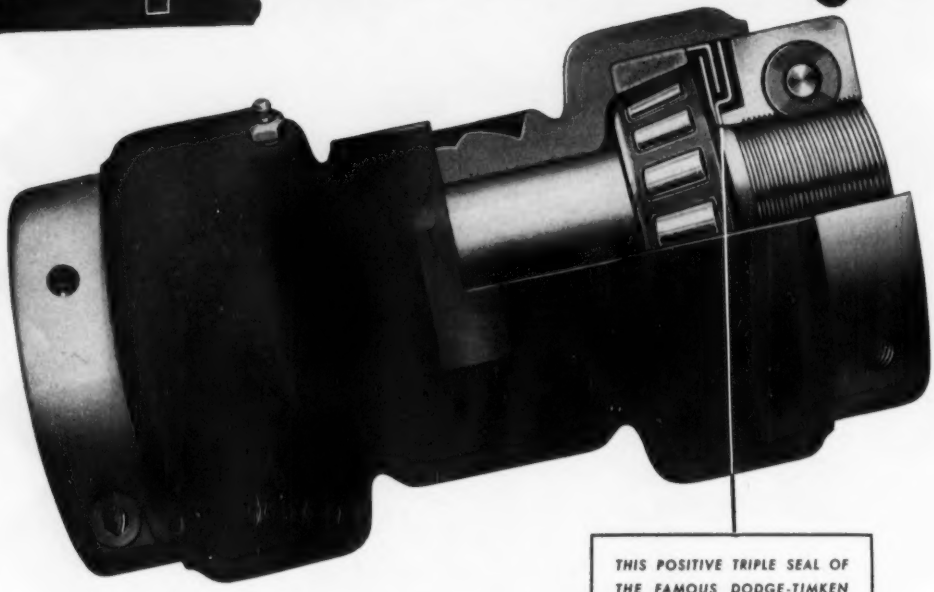
BALDWIN-REX
ROLLER CHAINS

BALDWIN-DUCKWORTH
DIVISION OF CHAIN BELT COMPANY
a complete line from ¼ to 2½-inch pitch

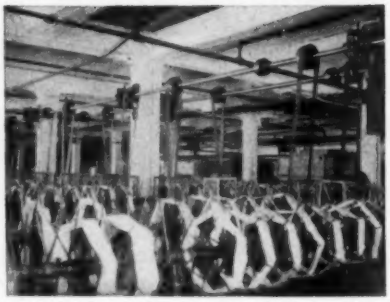


 For more information, write direct or use Reader Service post card.

Stops Oil Damage!



THIS POSITIVE TRIPLE SEAL OF THE FAMOUS DODGE-TIMKEN TYPE C BEARING ELIMINATES OIL DRIP... HERE IS THE IDEAL BEARING FOR TEXTILE MILL USE!



This installation of Dodge-Timken Hanger Bearings protects quality and profits. Special seals prevent oil leakage on the product, reduce "seconds." Bearings remain properly lubricated, saving labor.

Is OIL DRIP eating holes in your profits? To keep the lubricant where it belongs—*inside the bearing*—switch to Dodge-Timken. These famous bearings, noted throughout the world for quality, have proved themselves in millions of industry's toughest jobs.

The type C Dodge-Timken Bearing is especially adapted to use in the textile field. Its indestructible steel seal positively prevents lubrication leakage—definitely cuts a mill's loss from "seconds."

Available from distributors' stocks—in shaft sizes from 1-7/16" to 3-15/16". Completely assembled, factory adjusted, pre-lubricated and ready to install on the shaft for a minimum of 30,000 hours of uninterrupted service. Call your nearest Dodge Transmissioneer. Or write us for detailed bulletin.

DODGE MANUFACTURING CORPORATION
1400 Union Street • Mishawaka, Indiana

CALL A DODGE TRANSMISSIONEER. He's factory-trained to help solve your power drive problems. Look for his name under "Power Transmission Equipment" in your classified telephone directory.

DODGE
of Mishawaka, Ind.

This FREE MANUAL brings you up-to-date on the use of IMPROVED PLANT LIGHTING to SOLVE defense production problems

32 PAGES OF THE

Latest Lighting Data

AND OVER 50 ILLUSTRATIONS SHOWING

How Leading Mills and Plants

are obtaining more production . . . greater precision . . . fewer rejects . . . lower accident rates . . . higher employee morale through the use of the 12 BASIC BENJAMIN LIGHTING SYSTEMS and many other lighting units for special applications

PURPOSE OF THIS GUIDE is to provide you with up-to-the-minute information on the elements involved in securing *better lighting for increased production*. It is designed to show you how to analyze lighting problems and serve as a guide to their solutions.

THE GUIDE TELLS YOU HOW Benjamin Lighting Specifications can be applied today . . . under today's conditions . . . *to meet today's production problems*, today's need for greater use of floor areas and today's problems of installation.

12 BASIC BENJAMIN LIGHTING SYSTEMS and many specialized lighting units to help solve production problems, are recommended by Benjamin. These Systems are the result of *50 years of specialization* in the lighting of all types of mills and plants. Included are those engaged in the manufacture of essential goods, such as textiles, aircraft, guns, ships, tanks, powder, ammunition, chemicals, clothing, food, etc.

IMPORTANT INFORMATION is also included, concerning recent Benjamin developments which *facilitate maintenance, cut operating costs* and *provide sustained lighting efficiency*. Covered are such advancements as the new "Magna-Flo" Systems which utilize the new Slimline Fluorescent Lamps; "Springlox" Lampholders, which speed up fluorescent lamp maintenance; and "Turnlox" reflector equipment, which promotes simplified maintenance of incandescent units.

THE GUIDE IS WRITTEN for the busy industrial executive, engineer, foreman, architect, and all others concerned with the planning, purchasing and installation of industrial lighting equipment in plants engaged in essential production. For your free copy, sent without obligation, write today to BENJAMIN ELECTRIC MFG. CO., DEPT. EE, DES PLAINES, ILLINOIS.

SCORES OF QUESTIONS LIKE THESE ARE ANSWERED IN THIS FREE GUIDE . . .

How many can you answer NOW?

What Defense Production Problems can be solved with Improved Plant Lighting?

What are the 6 steps in the initiation, development and completion of a successful planned lighting program?

How to analyze present lighting

How to determine how much light and what kind of light is needed

How to select the lighting system best suited for each lighting requirement

How to solve special lighting problems with special lighting units

How to secure specifications and estimates

How to appraise lighting equipment for plant lighting

How to determine which lighting system best answers your needs.

Attach this to your letterhead and mail to:

Benjamin Electric Mfg. Co., Dept. EE
Des Plaines, Illinois

Please send, without obligation, the FREE GUIDE to IMPROVED PLANT LIGHTING, containing up-to-date information on how to solve defense production problems by the application of latest lighting practices.

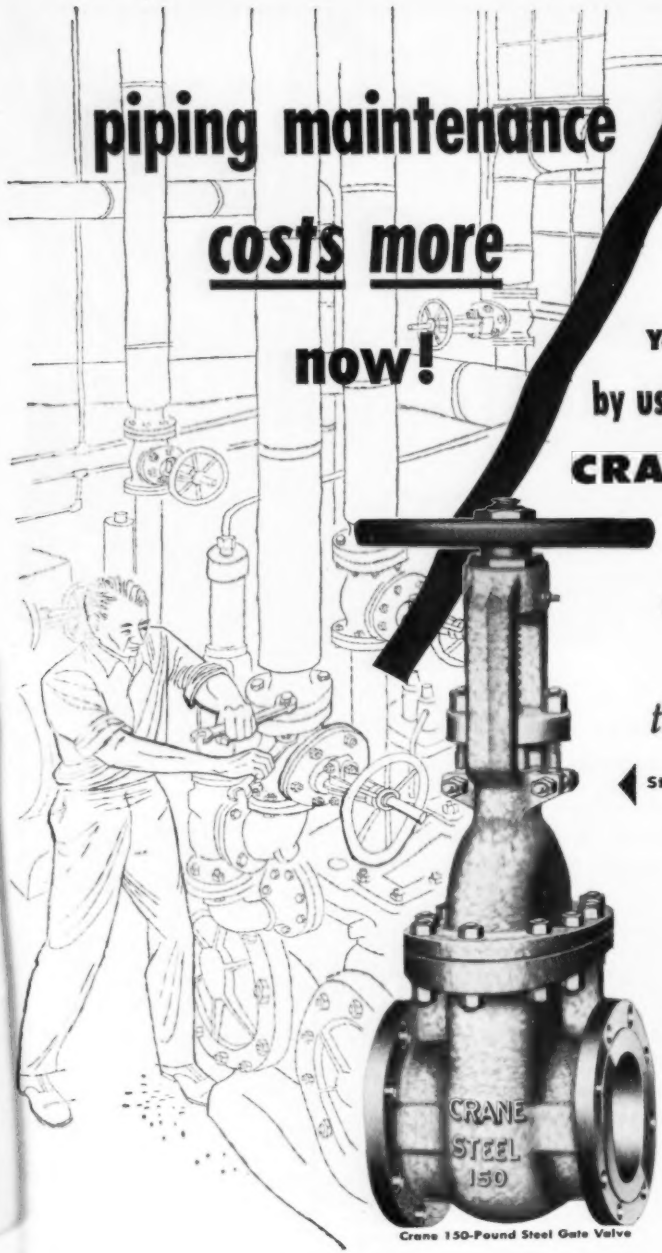
B-5488SRR

50 BENJAMIN

BENJAMIN *Lighting Equipment*

SOLD EXCLUSIVELY THROUGH ELECTRICAL DISTRIBUTORS

piping maintenance costs more now!



Crane 150-Pound Steel Gate Valve

You spend less for it by using Dependable Quality

CRANE VALVES

...That's why more Crane Valves are used than any other make

Steel valves that stay on the job

You can practically forget valve maintenance worries with Crane Cast Steel Wedge Gates. They're unusually rugged... amply reinforced at all stress points. Disc is precision-guided to reduce seating surface wear. Straight-through ports give smooth flow, with minimum turbulence and erosion.

Stuffing box depth and design assure tight stem seal...long packing life. Valves available in trim materials for steam, water, gas, oil, and oil vapor services.

Ask your Crane Representative about the better quality and greater dependability of Crane valves—your assurance of on-the-job performance that spells lower final cost.

CRANE

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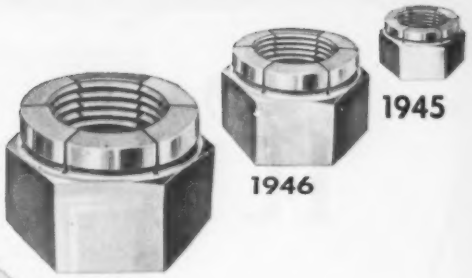
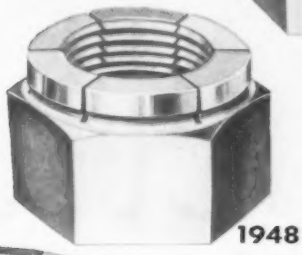
VALVES • FITTINGS • PIPE • PLUMBING • HEATING

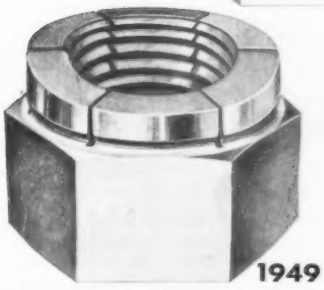
FLEXLOC®

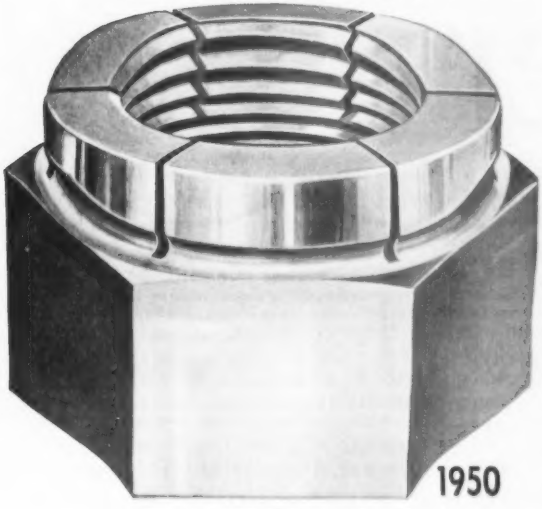
SELF-LOCKING NUTS

"They won't work loose!"









GROWING

in importance . . .

You'd be surprised at the number of new accounts we add each week for FLEXLOC—our one-piece, all-metal, stop- and lock-nut that *"won't work loose!"*

Nearly every branch of industry is represented, and there is unquestionably a rapidly growing preference for self-locking nuts that won't unwind, once they have been tightened.

This ... because nuts that *stay tight* promote uninterrupted production and cut maintenance costs—two important economy factors.

FLEXLOC features include: one-piece, all-metal *construction*—nothing to shift, work loose, or forget; *resilient, automatic-acting locking sections* that are responsible for FLEXLOC's closely controlled torques; *positive, ample resistance* to the most chattering vibration; and last but not least, the fact that the FLEXLOC Lock-Nut can be reused a great many times.

Our FLEXLOC Catalog No. 619-A tells the whole story. It's yours for the asking. And if you'd like some sample FLEXLOC Nuts, we'll be glad to send them.

SPS STANDARD PRESSED STEEL CO.

JENKINTOWN 35, PENNSYLVANIA

For more information, write direct or use Reader Service post card.

it's a case of better fabrics, faster

"We can't talk ourselves out of this one—they're getting 15 or more dozen pairs of finest quality hosiery fabrics in 8 hours with their new Reading Machines."

• • •

The new "Reading" Machines are producing full-fashioned stockings of superior quality and at higher speeds than ever before possible. Many exclusive "Reading" features give higher precision in operation and greatly simplified control . . . 30 sections . . . 51 and 60 gauge.
TEXTILE MACHINE WORKS • READING, PENNA.

The "READING"
Full-Fashioned Knitting Machine

Frank L. Nagle

By HENRY G. LORD

With the death of Frank L. Nagle on July 1st, in his 91st year, almost the last of the "old guard" of business papers publishers and advertising men has passed away. For sixty-five years he was associated with the *Textile Record* and TEXTILE WORLD. Few men had more friends and acquaintances, not only among the older generation throughout the textile industry, particularly among textile machinery and equipment builders, but also with their sons and grandsons. They will miss a good friend of many years standing.

Since his retirement in 1945, he had divided his time between his home in Boston and his winter home in Florida, until his failing health in the last year prevented traveling.

When the *Textile Record*, which he and his brother had established in 1880, was merged with TEXTILE WORLD in 1903, he became my partner in the firm of Lord & Nagle. It was a happy business association. We agreed on publishing policies and, although advertising was his special assignment in our partnership, he was a firm believer in building editorial service to the subscriber to the highest possible standards.

In the late 1890's and early years of 1900, when business and trade papers had not acquired the status and acceptance that they now have, by his own personality and integrity, he commanded the respect of his customers for his paper as well as himself, and his customers became his friends. I never knew him to make a statement which he knew to be untrue and no advertising contract that he closed had any implied promises or provisions that might lead to misunderstandings.

Frank Nagle liked people; he had a real talent for friendship and a desire to be helpful to his friends. No amount of trouble was too great for him if he could be of service to them.

He was intensely proud of TEXTILE WORLD and its successful accomplishments, to which he so largely contributed. One of the pleasantest business memories I have was the occasion when he and I, after completing our partnership arrangement, went together to visit the advertisers in the two publications and arrange the plans for continuance in the new publication which was to be called *Textile World Record*. It was a very heartwarming experience. It was like an "Old Home Week." We were almost always told to write our own ticket, with warm congratulations and best wishes for the new team.

Later on, when Textile Manufacturers Journal merged with us, to become *Textile World Journal* and later to resume the original name TEXTILE WORLD, Nagle was chairman of the board. And, still later, when the merger with the McGraw-Hill Publishing Company occurred, in 1928, he was advertising director of the Textile Division until his retirement.

Outside of his business, because of his liking for people, he took an active part in organization work. As the son of his father, General James Nagle, a Civil War hero, he was a member of the Loyal Legion, of which he later became commander. He was also Past Grand Commander of the Knights of Templar of Massachusetts and Rhode Island and a trustee of Aleppo Temple for thirty years. He was a life member of Dalhousie Lodge, A. F. & A. M., a member of the Sons of the American Revolution, and a former president of the Massachusetts Charitable Mechanics Association. In his later years he took great pride and interest in his membership in the Ancient and Honorable Artillery Company, of which he became Captain.

He was instrumental in founding the Textile Exhibitors Association and the Knitting Arts Exhibition; and indeed, whenever there was a convention in any branch of the textile industry, Frank Nagle was always there with a smile and handshake. He seemed to know everybody and everybody knew him and he seldom failed to remember a name. He was a constant source of amazement and admiration to me for the extent of his circle of friends.

The good will and respect that he enjoyed among so many influential people, in the industry and outside of it, was a real factor in building the high status of textile journalism today.

I cannot think of a higher tribute than a remark made to me by one of his business friends, which I can sincerely echo, "One of the privileges of my life has been knowing Frank Nagle."

1 *AS HE STARTS ON HIS TOUR of the mill, Vice Pres. Charles Reynolds looks at the safety board that shows 497 days without a lost-time accident. This record is not surprising at Spindale because good safety goes hand in hand with good supervision.*

CAMERA TOUR:

SPINDALE MILLS— Where Quality Has Top Billing

All operations at Spindale Mills, Inc., Spindale, N. C., are geared to produce top-quality fabrics—

- ***The entire plant, except the slasher room, is air conditioned***
- ***Preventive maintenance is practiced throughout the plant***
- ***Materials in process are handled as little as possible***
- ***New methods, machines, and techniques are continuously tried out***

By W. A. THOMASON, JR., *Southern Editor, TEXTILE WORLD*

WANT to see a first-class fancy mill? Come with us on this camera tour.

Spindale Mills, Inc., Spindale, N. C., has spent and is continuing to spend a lot of money to produce quality fabrics. The mill is fully air conditioned with refrigeration, except in the slasher room.

Mechanical handling equipment is used to prevent damage to laps, warps, and other types of packages.

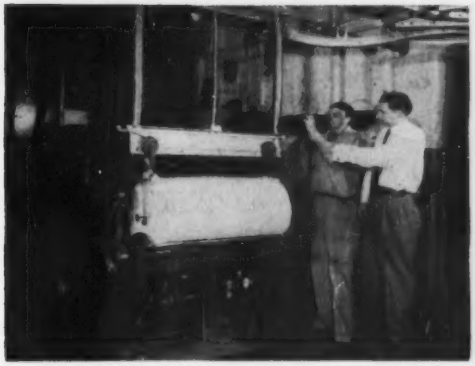
The opening line has bypasses around all machines so that as cotton varies, only those machines needed to do the opening and cleaning required are used.

Preventive maintenance is practiced throughout the plant. It pays off, too. Sup't. Lewie White told me, "We have 16 Whitin F-2 spinning frames; and in the two years we've had them, we have had to replace only one bolster. And our spindle speed on these frames is 10,000 rpm." The same type of savings result from preventive maintenance in other departments of the mill.

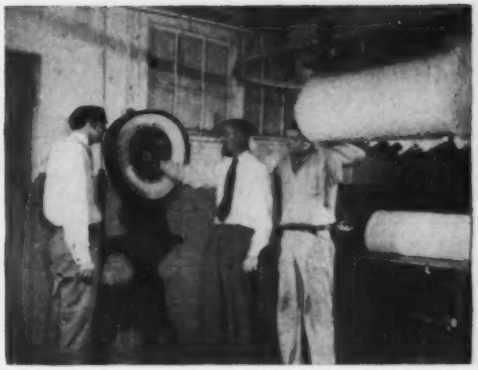
The shop here is unique. Not only does it do all of the major repairs to the equipment, but it does all the construction work as well. The additions to the plant recently completed and now underway were planned and constructed by engineering-department and shop men. Extra labor is hired to supplement the regular help on these major projects.

New processes, equipment, and techniques are continually tried out to try to produce better fabrics economically. You will see some of these on our tour.

Now—come along with Vice Pres. Charles Reynolds and the TW camera on a complete tour of the plant.



2 *PNEUMATIC LIFT SECTIONS doff the pickers. Mr. Reynolds points out to J. C. Hill, picker operator, that the lift section is actually a standard dip section modified to drop down, pick up, and raise the picker laps.*



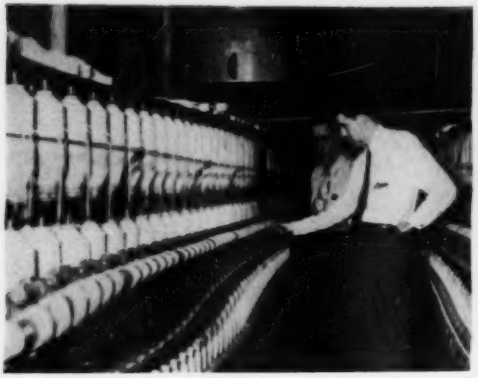
3 *LAPS ARE WEIGHED automatically on the monorail. W. R. Connelly, superintendent of carding and spinning, points out some of the features of the system to Mr. Reynolds. The scale has a permanent adjustment for tare.*

4 *LAPS ARE NOT HANDLED by hand until they are unloaded at the cards. Lee Crowder, card-room overseer, tells Mr. Reynolds that he is able to keep the room much cleaner with this system and that the laps are in much better shape.*

5 *EACH CARD IS GROUND every 10 days. Mr. Reynolds explains to Charlie Edwards, a grinder for 9 years, that the frequent grinding keeps neps down and carding quality up if the grinding is good. Vacuum stripping is used.*

6 *LEATHER TOP-ROLL COVERINGS are used on all drawing frames. Mr. Connelly says that he gets the best work on this fine combed stock with leather. He is shown as he discussed with Mr. Reynolds the oscillating top-roll clearers on this frame.*

7 *A SUPERDRAFT ROVING FRAME is being tested as a possible replacement for the two-process roving now being used. Mr. Reynolds says that the mill is testing higher-draft spinning frames to use with this single-process roving.*



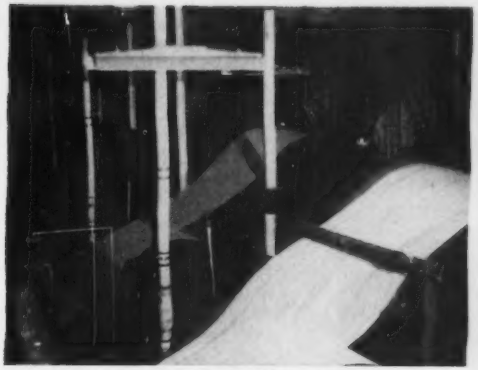
8 *TOP AND BOTTOM CLEARERS have been taken off the back lines of rolls. The spinning-room overseer, Russell Frye, says that the overhead cleaner keeps the rolls cleaner, eliminates the top-clearer waste, and takes work off spinners.*

9 *THIS TAILING MACHINE, operated by Mary Nanney, has been modified considerably. Because dye sleeves are used, a special core that has a contact shoulder is used to keep the sleeve from being in direct contact with the drum before the winding is started.*

10 *HERE'S A FIRST-CLASS package dyehouse. All dye packages are cheeses, and the production capacity is 40,000 lb. per week. Overseer Jack Yelton, shown at right with Mr. Reynolds, says that he has about 140 colors in his color strap. All carriers are handled by a monorail electric hoist.*

11 *OVERHEAD CAMS are used on the Abbott quillers. Lewie White, superintendent, is shown as he discussed these cams with Mr. Reynolds. Mr. White says that they give a uniform build, fill out the quills all at one time, and require a minimum of maintenance.*

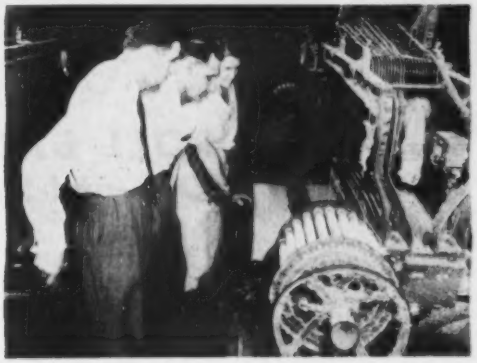
12 *HEADS ARE SET OUT on the warpers used for colored work. These heads can be set out because the colored ends have been set during the dyeing and will not kink. The advantage is that when an end breaks, the warper will stop before the warp laps.*



13 *HOODS HAVE BEEN REMOVED from the slashers. As a result, the slashers are cleaner and less lint is accumulated. According to Mr. Reynolds, the removal of the hoods has had little effect on the drying capacity. A ceiling fan removes steam.*

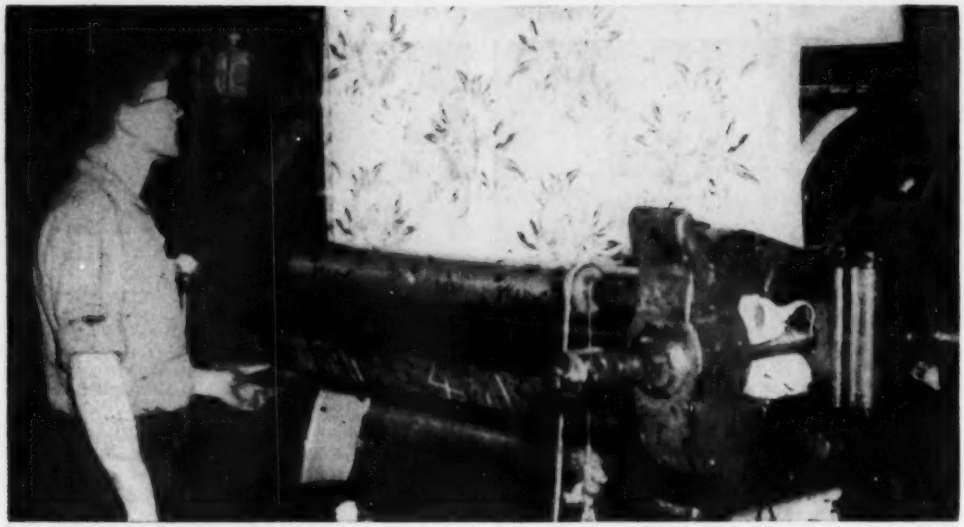
14 *AIR-CONDITIONING DUCTS are placed at each slasher head for comfort of the operators. The ducts can be cut off and on by the operators. Mr. Reynolds and Horace Drawdy, overseer of preparation, are shown as they inspect the system.*

15 *WEAVE-ROOM SECOND HANDS check each loom as a new warp is put on. Mr. Reynolds watches Randolph Smith make an inspection. Loomfixers take care of all maintenance, and all major repairs are made in the mill shop.*



16 *THE WEAVE ROOM has about 300 styles running on 576 looms. The fabrics are mostly fancy dress and shirting fabrics. The looms are Draper models X-2 cam, XP dobby, and K dobby. A swatch of each new warp is checked by the designing office.*

17 *GOOD COMMUNITY RELATIONS are maintained by Spindale Mills. The newly elected Mayor, Gomer Davis, is shown in the cloth room during a visit to Mr. Reynolds and Mr. White at the mill. The mill contributed generously to the construction of a community building recently completed by the mills of Spindale.*



ROLL-PRINTING QUALITY depends largely on good furnisher brushes, and Manhattan Print Works has helped develop a brush that gives excellent quality plus an amazing running life.

Our PRINT-ROLL BRUSHES Are 18 Months Old—and Still Going!

▶ We wanted longer print-roll furnisher-brush life. Here's how we got it.

By **J. KLUTHE,** *Manager, Manhattan Print Works*

FURNISHER BRUSHES used on a roller printing machine to transfer dyestuff from the color trough to the engraved surface of the copper print rolls must spread the color evenly over every part of the roll. Unless spreading is even the whole pattern will not get its full quantity of dyestuff when the surplus dyestuff is removed by the doctor blade. Uneven color application or particles of foreign matter on the rolls will cause flaws, and consequently seconds, in the printed cloth.

In the past, the best furnisher brushes we could get had wooden cores and tampico bristle. They were fairly light in weight—a 54-in. brush weighing about 25 lb. This lightness was important because the operator of the machine had to change print rolls as often as four times a day. To install some of the brushes he had to get down on his haunches and lift the brush into place on the machine—a position from which not too much leverage can be exerted.

Tampico brushes were all right in this respect and also seemed low enough in cost. However they had serious faults. They were short-lived, for example.

In general use, a tampico furnisher can be counted on for little more than a week or ten days of efficient service before it is worn out. Tampico fiber is not very strong; and since the furnisher brushes are revolved by pressure against the positively driven print rolls, the fiber becomes lifeless after the brush has been used a few times, and a new brush must be installed.

Another fault we found was that both tampico bristle and wooden cores had an affinity for dyestuffs. To prevent bleeding, it was necessary to have a different brush for each color printed.

• **NEW FURNISHER.** So, when we were offered a furnisher brush having a metal core and nylon bristle, we immediately tried it out. This brush avoided many of the faults of the tampico brush. Its useful life was long, and neither the metal core nor the nylon bristle absorbed color.

In actual use, though, we found that the type of metal-core, nylon-bristle brush we first used had one serious fault: It was heavy and therefore hard to install. Also, a lot of pressure by the bristle against the print roll was required to revolve the furnisher brush. Eventually this pressure would cause the bristle ends to bend over and finally snap off. These "snaps" would catch under the doctor blade and cause seconds in the printed cloth.

The useful life of any brush, of course, is the length of time the bristle will stand up before it tends to spread out, mat down, or break off.

However, the new type of brush looked promising; and we went on with further experiments.

The furnisher brush we finally made our standard combines the advantages of light weight, strength, and a firm bristle surface that presses evenly from end to end of the brush. A minimum of pressure is required to hold the brush in contact with the print roll, and there is no tendency for unsupported bristle ends to bend or snap off.

We find that this new type of furnisher brush is more easily cleaned after use. There are no spaces at the base of the bristle to catch and hold color.

The over-all results are that today we find our finisher brushes last indefinitely and can be used for different colors by easy cleaning after use.

The first of the present type of metal-core, nylon-bristle brushes we installed 18 mo. ago are still in use and doing just as good a job as when we first put them on our machines.

"If it is good economy to give production machinery the best in maintenance, it is good sense to care for industry's human machines."

IN-PLANT FEEDING

Select the Right Method For Your Type of Mill

- Employee feeding is a comparatively new field to textile mills, but the practice is becoming more and more accepted by both employers and employees.
- There are several ways of handling the job. Sometimes a combination of present-day methods serves better than a single feeding system by itself.
- In making a decision on in-plant feeding, keep in mind that the intangible benefits obtained all around mean more in the long run than the dollar outlay.

By **RICHARD C. SCOTT**, New York Editor, TEXTILE WORLD

A REPORT TO TEXTILE-MILL MANAGEMENT

MODERN CAFETERIA for employees at the P. H. Hanes Knitting Co. cotton spinning mill at Hanes, N. C., offers a relaxing place to sit down for lunch. Meals are furnished at cost. Automatic vendors (rear) supplement the regular menu.

Whether you do or you don't attempt to feed your employees while they are at the mill or plant, you should be concerned with these half-a-dozen questions. Consider them for a moment, and then look over the figures and comments on them in the following pages.

1. Why should textile manufacturers worry about in-plant feeding?
2. How good a job percentagewise are textile mills doing compared with other types of industrial establishments?
3. Should a mill hire a local restaurateur or a national industrial-feeding organization to take over the feeding job? Or should a mill hire on a salary basis its own feeding-establishment manager?
4. Which are the outside organizations that are operating textile-mill employee-feeding establishments today, and how do they operate?
5. What has been the employee-feeding experience of some specific textile mills?
6. How does a New England textile plant of 725 employees provide top cafeteria service for all personnel alike, to the benefit of employer as well as employee?

VENDING MACHINES located conveniently near the job are a boon to employees subject to physical exertion. Very little time is lost once men and women get used to the privilege.

METAL CONTAINERS and vacuum jugs that provide hot plates of food and hot coffee are adaptable to mobile-truck feeding of employees like these at P. H. Hanes Knitting Mills, Winston-Salem, N. C.

1 Why In-Plant Feeding Anyway?

It is pretty well agreed* that feeding employees within manufacturing plants brings about the following benefits:

1. Provides food service in locations where other adequate facilities are not available
2. Is convenient for and saves the time of employees, executives, customers, and other visitors
3. Builds morale and increases productivity by providing the human machine with nutritious food at low cost.

One textile plant, Plymouth Cordage Co., Plymouth, Mass., has been recognizing these intangible benefits of employee feeding since 1902 and is still a strong believer in the procedure.

Not many would quarrel with the benefits obtained from establishing some kind of employee-feeding system. Everyone wants to see "adequate facilities" that will be a lift to employees and throw credit on the mill organization. Everyone likes convenience, the saving of time, and the genuine building up of morale around the plant. And finally, everyone likes nutritious, and if possible, warm food at low cost.

* John W. Stokes in *Employee Feeding*; Edmund S. Whitten, Inc., Boston, Mass.; p. 10.

But are these reasons important enough for a mill executive to worry about, especially when a long-term expense is involved?

It must be kept in mind that the three desirable conditions listed above cannot be brought into being by a mere order today for a subordinate to "take over the project" as of tomorrow. Some long-term planning and the expenditure of both time and money go into the pot too.

For example, someone will have to be put in full charge of the program, and he will need enough time to look thoroughly into all the ramifications of the subject. It will be his job to decide what type of program is best for your mill so that (1) the food is of good quality and is properly cooked and prepared, (2) the service is prompt and courteous, (3) the menus are well-balanced and varied, (4) the prices are reasonable, (5) the over-all facilities are adequate, and (6) the cleanliness of the feeding service is of the highest standard.

Other factors to consider in the "to feed or not to feed" picture are (1) whether a mill's employees need to have their morale built up, (2) whether the help need to have their on-the-job "fatigue" gradually banished, (3) whether there is a problem of absenteeism in the mill that might be eased through in-plant feeding, and (4) whether the mill needs more production per hour per employee to meet its over-all rising costs. All of these factors are important, though in some mills the need is more in evidence than in others.

2 How good a feeding job are textile mills doing compared with other types of industrial establishments?

A recent report† on a survey of American industrial-feeding procedures points out (1) that in-plant feeding is here to stay and (2) that food services are increasing. Over-all participation in food service by U. S. industrial employees figures out as 59% in November of last year, whereas an earlier War Food Administration survey showed only 40% participation in 1944.

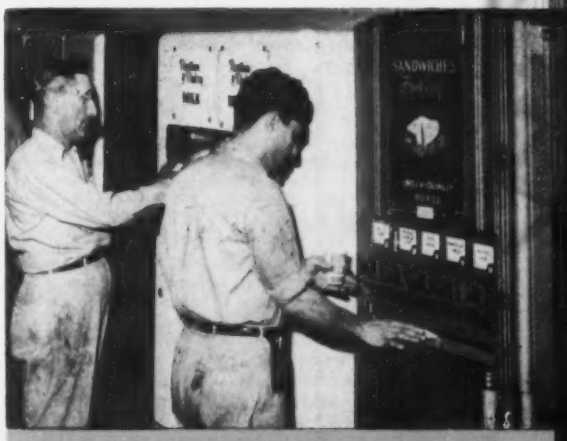
Of the textile-manufacturing plants answering the survey, an average of 63% of the total employees were listed as patronizing the food services within these mills in 1950. This percentage, higher than the over-all U. S. industrial-plant average, might well be higher if every textile mill in the country had been questioned and had responded. As it was, a total of 34,575 employees out of the 54,342 listed by textile mills in the survey were indicated as patronizers of company restaurants, cafeterias, canteens, mobile food wagons, and vending machines — the most popular methods of in-plant feeding.

LUNCH PERIODS. In American industry in general, the most popular length of lunch period is 30 min., while office workers usually get longer. Textile-mill lunch periods reported ranged from no time off at all for production employees to an hour for everyone. The textile-mill average was a 31-min. lunch period for piece-work and day help and 52 min. for office workers. So textile mills are already as generous in their lunch periods as the average U. S. industrial plant.

Regarding the various types of food service offered in the primary textile industry, especially in the medium-size and large plants, cafeterias and vending machines run fairly equal in popularity. There were 14 cafeterias, 12 vending-machine systems, nine canteens or snack-bar arrangements, and seven food-cart systems among the 22 mills answering this question. Four of these mills also had waiter-service restaurants, and one fed its employees in the local "Y".

The ratio of smaller mills who answered the questionnaire to the number of small mills existing in the United States today was small. Indications are that small production units are often satisfied to offer their help food-truck service that passes through the mill on definite schedules,

† *A Report of a Survey of Industrial Feeding Procedures 1950–1951*, prepared by Field Research Div., Paper Cup & Container Institute, New York.



FULLY AUTOMATIC CAFETERIAS that sell popular luncheon items are being turned to by many small mills with inherent space and equipment problems.

HOT LUNCHES prepared and served at cost for local school children in the mill cafeteria can do much to cement community relations, as is done here by Russell Mfg. Co., Alexander City, Ala.

vending-machine service, and small canteen service at a convenient location. Some use two, and occasionally all three, of these services.

VENDING MACHINES. Since World War II, mill plant managers have in general been more willing to allow food- and drink-vending machines out on the floor or near elevators, etc., than they were formerly. By far the most popular items sold through these machines are carbonated beverages. Candy and coffee trail badly in a tie for second place, and ice cream is third in popularity. Items like cakes, pies, sandwiches, fruit juices, milk, and even soups, are more likely to be bought directly off mobile food wagons coming through or from the canteen.

The increased use of vending machines is foreseen by many mills, especially smaller plants. Vending machines not only pay for themselves but also provide a "profit margin" that in many cases is turned over to employees for health or recreation funds or other types of community activity. Those mills with both vending machines and a canteen or cafeteria in several instances indicated that vending-machine "profits" were used to make up some of the deficit the canteen or cafeteria might have been running into from month to month.

FINANCIAL OPERATION. Along with the various feeding systems available go several different methods of financial operation. Vending machines offer no financial worry in most cases. Concessions let out to local people for canteen service and mobile food-cart service put the burden of financial responsibility upon others. But with a concession system, on the other hand, a mill has no control over the quantity or variety of the food offered nor of the prices asked.

In-plant feeding that is operated and financially controlled by mill management appears to give the employee extra value both nutritionwise and dollarwise. Management-operated canteens, food trucks, and cafeterias attract workers if they know that at such places they can get good food at as good or better prices than anywhere else in town. And this feeling of "service to employees" is one that mill executives are finding more and more worth while.

Among the medium-size plants surveyed, mill-managed feeding is generally expected to be operated at a "reasonable" deficit. This deficit includes not only the floor space allocated to the service and other overhead charges, but also monthly deficit sums ranging from 12 to 89¢ per employee working in the mill. The average 1950 deficit per employee for this group of responding mills was 27¢ per month. Several respondents expressed the belief that this per-capita deficit was paltry compared to the benefits obtained by everyone in the long run.

In considering the "deficit" angle and its cost per employee, it had to be assumed that all companies answering the survey included the same items in "overhead." Perhaps some mills figured "loitering on company time" in their deficit figure and others did not. But the figures do indicate that feeding deficits need not be staggering under company operation.

To the question of whether mills intended to expand their in-plant feeding facilities, 64% answered "No," 9% answered "Yes," and 77% weren't sure. The greatest expansion will certainly take place among those mills with as yet very limited facilities and among some of the smaller, better-run plants.

3 Which are some of the better-known outside organizations that are operating textile-mill employee-feeding establishments today, and how do they operate?

Among the largest and best known nationwide industrial food-service organizations are (alphabetically) Crotty Brothers, Slater System, and Harding-Williams.

The services offered by outside feeding companies are many and useful, especially for a mill with no experience in feeding and with no desire to get bogged down in its details and the quicksilver of its potential losses. Outside firms, for example, are set up to consult with a mill first on the space and equipment it will need to do the job the mill has in mind. Some also provide blueprints and specification details if any refurbishing or alteration of an inside area is necessary.

In general, food-service organizations relieve a mill completely of raw-material (food) supply headaches, its preparation, employee wage and time-keeping details, and employee-benefit arrangements. The purchasing power of the national food-service organizations is also great enough to command respect in local markets. For example, when the Danville, Va., market on pork loins for some reason rose 20¢ above normal recently, Slater System quickly shipped 10,000 lb. of loins to its division at Dan River Mills and brought the local price back to normal.

Such service by the nationally known food-service organizations happens frequently, and the benefits derived therefrom are enjoyed by employees, management, and the food organization alike. Central purchasing agents make a point to advise local managers on scarcities, on raw-material prices to pay, and on seasonal menus that will be nutritious yet not expensive to prepare.

Other aspects of employee feeding by a food-service organization include (1) standard recipes so that employees will become accustomed to a maintained quality, whatever the dish (2) a minimum of paper work by the local manager, (3) local jurisdiction over the hiring of employees within the mill-feeding system, (4) an allowance for standardized local food favorites to be served frequently in particular communities, even though other plants of perhaps the same firm have no demand for that particular dish.

4 Should a mill hire a local restaurateur or a national industrial-feeding organization to take over the feeding job? Or should a mill hire on a salary basis its own feeding-establishment manager?

A mill considering in-plant feeding for the first time should not rush hastily into making a decision on who should do the job.

The first thing to decide as management is, what type of feeding would fit your employees best? Some of the factors to consider are:

1. Are you located in a city or town with good eating places nearby, or are you more or less isolated?
2. Do your employees live right near the mill, in homes from where hot food is already being brought in in lunch baskets by members of their families?
3. Do you have some kind of centrally located warehouse or storage space or building that could be converted to in-plant feeding purposes?
4. Do you concede that a reasonable annual financial deficit that often accompanies the running of such an establishment might pay for itself in improved employee morale, health, regularity of reporting to work, and productivity?
5. Would you prefer dispensing with the headaches of food-distribution operation by letting an outside man or organization worry about day-to-day and month-to-month details?
6. Do you have the wherewithal to hire a trained and proven restaurant or hotel manager and give him an executive standing on your team, and then hold him responsible for in-plant feeding in all its details?

The list of questions could be added to by anyone thinking about the subject for a moment. But the essential thing is to list the factors as they affect your own mill, your employees, your financial position, and your long-term plans for your organization. Then take the bull by the horns and make your own decision.

National Food-Service Management Firms And Some of Their Textile-Industry Clients

Crotty Brothers

Address: 137 Newbury St., Boston 16, Mass.
Mills Served: American Woolen Co., Lawrence, Mass. (Ayer, Shawsheen, and Wood Mills)
Celanese Corp. of America, Bishop, Texas
Woodside Mills at Easley, Fountain Inn, Greenville, Liberty, and Simpsonville, S. C.

Harding-Williams

Address: 16 North Wabash Ave., Chicago 2, Ill.
Mills Served: Celanese Corp. of America, Cumberland, Md.
Industrial Rayon Corp., Cleveland, Ohio
Hanes Hosiery Mills Co., P. H. Hanes Knitting Co., P. H. Hanes Spinning Co. } Winston-Salem, N. C.

Mobile Canteen Service, Inc.

Address: P. O. Box 36, Valley Falls, R. I.
Mills Served: Crown Mfg. Co., Pawtucket, R. I.
Hathaway Mfg. Co., New Bedford, Mass.

Slater System, Inc.

Address: 2503 Lombard St., Philadelphia 46, Pa.
Mills Served: American Viscose Corp., Marcus Hook, Pa.
Avondale Mills, Sylacauga, Ala.
Burlington Mills Corp. of New York, New York
Dan River Mills, Danville, Va.
James Lees & Sons Co., Bridgeport, Pa.

Shall I Select a Management-Fee Or a Concessionaire-Type Contract?

• In a management-fee contract with a food-service organization, the mill management keeps control of all specifications of the service-to-be: canteens, food carts, waiters, price ranges, types of food to be served, hours of service, etc. The food-service organization takes care of all operational bills coming in—on food consumed, labor, insurance, and incidentals—and adds a small percentage for itself on gross sales for the month.

As a result, the food-service company and mill management are both interested in seeing employee satisfaction with the quality and retail price of the food and in increasing employee participation in the eating service.

• A concessionaire-type contract is based on a profit each month instead of "service first." Because in-plant food service is subject to conditions that do not normally exist in commercial work, a concessionaire (especially if he is a local individual) often has difficulty in keeping his business on an even keel.

For example, his hours of service are limited. In many plants lunch hours are not staggered, and so it becomes necessary to serve a large number of people at one time. This procedure is expensive payrollwise for the concessionaire.

Second, a concessionaire's customers necessarily vary with week-end plant closings, production material shortages, within-the-plant layoffs, labor disputes, and seasonal production trends.

Third, because management insists that second- and third-shift employees be treated alike, it is frequently costly to serve small night shifts the same menu as was served at noon; and yet it is good industrial relations to do so.

MOBILE UNITS at Dan River Mills Schoolfield, Va., Div., number nine on the first shift, five on the second, and three on the third. Each weighs 1½ tons when loaded. Service wagons (left) replenish vending wagon's hot sandwiches at frequent intervals.

How Much Kitchen Space For a Lunchroom or Cafeteria?

• Men experienced in the field say that requirements for industrial kitchen space can be roughly estimated from the following table.

Note the decreasing space-per-meal requirements as the number of meals to be handled increases. Basic equipment, required for any load, does not necessarily have to be increased for greater output.

Kitchen-aisles and working space do not increase proportionately with the number fed either.

Peak Meal Load	Kitchen Space Required	Square Feet Required per Meal
200	1,000 sq.ft.	5
400	1,600	4
800	2,800	3½
1,000	3,000	3

• 17 sq. ft. per person is about the right peak-load figure to use in estimating dining-room area requirements, including serving space, counter-waiting space, aisles, and dishwashing facilities.

CANTEEN at Plymouth Mfg. Co., McColl, S. C., provides off-hour snacks for employees. This service is part of the modernization program the mill has undergone recently.

DISHWASHING can be eliminated by mills not wishing to invest in heavy washing equipment through the use of paper plates and cups and wooden forks and spoons. But trashcans have to be emptied more frequently.

MOBILE TRUCKS at James Lees & Sons Co., Bridgeport, Pa., run on a three-shift basis and supplement both the cafeteria and permanent canteen service. Food-truck tenders are employees not of the mill but of the out-of-town food-service organization.

5 What has been the employee-feeding experience of some specific textile mills?

Julius Kayser & Co., Bangor, Pa.

- Local concessionaire has been operating cafeteria nearly four years
- About 475 people are served a day
- Three ½-hr. lunch periods are set up at noon
- Single ½-hr. supper period is provided for second-shift employees
- Top price is ham plate at 60¢
- Average purchase is 18¢
- Most money made on individual items (e.g., vegetable for 15¢)
- Company makes up any reasonable difference, resulting from low prices, between sales and costs

Hess, Goldsmith & Co., Wilkes-Barre, Pa.

- Cafeteria is company-operated
- Company loses $300 to $400 a month on the operation but considers the loss worth the good employee relations resulting
- Only one hot plate offered each shift
- Employees can bring and store their own sandwiches in the cafeteria until lunch time
- No eating allowed on the floor

Crown Mfg. Co., Pawtucket, R. I.

- Has a mobile-cart system operated on a concession basis
- 1,000 employees served from snack carts and a hot-food wagon
- 5% commission on the gross sales is returned to the company and goes into the Crown Employees' Assn. fund
- Company finds no cafeteria is necessary to supplement mobile-food units

West Point Mfg. Co., West Point, Ga.

- Has a three-way operation for 9,000 employees: cafeteria, mobile food wagons, and vending machines
- Non-profit organization set up to operate the three services
- Mobile wagons are electrically heated to keep pre-packaged meals hot
- Any profits made go into employee-benefit funds

National Hosiery Mills, Indianapolis, Ind.

- Cafeteria concession has a company subsidy
- About 75% of total employees eat in cafeteria
- Hot meals are available on two shifts

James Lees & Sons Co., Bridgeport, Pa.

- Has cafeteria, canteen service, and mobile units
- Two lunch periods provided at noon for cafeteria users
- Food wagons run on a three-shift basis on regular time and location schedules

Dan River Mills, Danville, Va.

- Offers three-shift mobile service, a snack bar, and a Country Club for employees and community events
- Smaller mobile units intercept regular wagons to keep them supplied with hot sandwiches
- Approximately 60 employees in the food-service set-up

Pepperell Mfg. Co., Lindale, Ga.

- Cafeteria meals served by departments
- 30-min. lunch period allowed employees

Hathaway Mfg. Co., New Bedford, Mass.

- Canteen kitchen located in completely renovated picker room
- Mobile units service 75% of 2,200 employees on regular schedule
- One chef and five wagon attendants prepare and dispense all food
- Top price for hot plate (e.g. hot meat, mashed potato, and vegetables) is 50¢
- Mill checks only the caterer's cleanliness and financial statements

Just how does a New England textile plant of 725 employees provide top cafeteria service for all personnel alike, to the benefit of employer as well as employee?

CAMERA TOUR THROUGH A MODERN TEXTILE-MILL CAFETERIA

Mount Hope Finishing Co., North Dighton, Mass., Applies Production-Control Methods to Its Cafeteria Operation

CHARLES D. WELCH, manager of the cafeteria at Mount Hope Finishing Co., believes that textile-mill cafeterias are not a luxury but a necessity. Industrially-trained Mr. Welch insists that closley controlled production methods, when used in a mill cafeteria just as in a fabric-production department, for example, will work well for both employees and management.

In industrial-feeding work for ten years now, Mr. Welch describes his job as one of supervision and coordination, including (1) constant attention to details and (2) planning far enough ahead.

The cafeteria-management job at Mount Hope Finishing Co. consists of purchasing in large amounts at opportune times, weekly menu planning, control of quantity and quality of food prepared, consumption records (at the end of each meal), "dry runs" on new formulas (recipes), and maintenance of the "home-cooked" quality in the food served. And the way employees flocked to the cafeteria the noontime this writer was a visitor there appears to justify the close attention to such details. And why not, when the meal checks ranged consistently from 23 to 55¢, averaging about 40¢?

MENU PLANNING. The two of us sat down and made out a typical week's menu just to show how his production-control method works. "First," he said, "we know pretty well from past records how many people we are going to have to serve each meal each day in the work week. Second, we want to prepare just enough of the various foods and have a substitute or two available if a quick emergency should arise. And third, we want to have as little left over as possible at the end of each meal."

All food is accounted for at all times, from the moment it arrives at the downstairs service entrance to the final reckoning of how many servings were obtained, for example, from the 3 gal. of green-pea soup cooked up Wednesday morning. All pots and kettles are marked with half-gallon and gallon lines on the inside. Levels are kept constant during cooking so that 3 gal. at the start means 3 gal. when serving time comes.

Food-production control like this requires constant supervision, or food losses will start to rise. Mount Hope Finishing Co. appears to have no such cafeteria troubles, thanks to its forward-looking management and employees. The health and esprit de corps of everyone in the plant appear to be excellent.

Kitchen Equipment Installed
At Mount Hope Finishing Co. Cafeteria

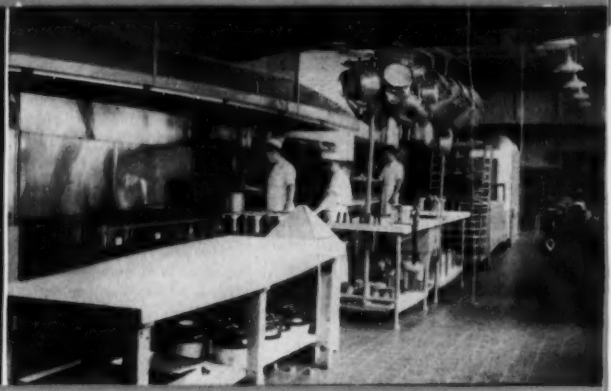
- 1 6x9 elevator from first-floor service entrance
- 1 6x12 freezer unit, kept at 0° F. for long-term storage of meat, fish, and ice cream; capacity of nine tons of packaged meat, trimmed and ready to thaw out and cook
- 1 8x10 walk-in cold-storage room, kept at 34° F. for meat storage; built by A. F. Underhill, Inc., Cambridge, Mass.
- 1 8x10 walk-in cold-storage room, kept at 36° F. for pastry and milk; built by Underhill
- 1 45-cu.ft. constant-circulation two-door refrigerator; manufactured by Puffer Hubbard Mfg. Co., Grand Rapids, Mich.
- 1 20-qt.-capacity (with 12-qt. interchange) electric mixer; manufactured by G. S. Blakeslee & Co., Chicago, Ill.
- 1 60-qt.-capacity (with 30-qt. interchange) electric mixer; manufactured by Blakeslee
- 1 3x8 salad-preparation table
- 1 200-lb.-capacity flour bin on wheels
- 1 baker's table with 100-lb.-capacity flour bin and 100-lb.-capacity sugar bin
- 1 12-shelf pastry rack on wheels
- 1 gas-fired three-decker Blodgett baking oven
- 2 gas-fired Garland roasting ovens with solid-top cooking surfaces
- 4 60-lb.-capacity Edison Hotpoint electric Fryolators
- 1 100-lb.-capacity model-H100 fat purifier that takes out acids and sludges removed from food in cooking; manufactured by Sparkler Mfg. Co., Mundelein, Ill.
- 1 60-gal.-capacity steam-jacketed kettle for quick boiling (3-min. boil from tap water) of potatoes, turkeys, etc.
- 1 25-lb.-capacity vegetable peeler; manufactured by Reynolds Electric Co., Chicago, Ill.
- 1 220-v. Westinghouse home Laundromat for washing towels
- 1 gravity-type meat slicer (with 70 different slicing widths); manufactured by Hobart Bros. Co., Troy, Ohio
- 1 3,000-piece-capacity model-75D Niagara dishwashing machine; manufactured by Blakeslee

1 "YOU SEE," cafeteria-manager Charles Welch explains to TEXTILE WORLD'S Dick Scott outside the cafeteria entrance, "we work out our daily menus a week in advance. Over here are today's entrees listed for everyone to see as they walk by in the morning, and behind me is tomorrow's menu."

2 "THIS IS our dining area, one half of it showing here. See how the high domes seem to lower the ceiling of the room, a former storage area. We can take care of 360 people at one time if we have to. We have a daily schedule for keeping the area spotlessly clean and attractive."

Photos by Bennett Cairns, Fowler, Mass.

4 "WE COULDN'T DO without our freezer. This door leads to an antechamber and has to be closed before the freezer-unit door is opened. Temperature maintenance, you know. We buy turkeys a ton at a time and freeze them. At the moment we have 1,900 lb. of beef in here, trimmed before it was put in."



5 "OUR KITCHEN is exposed to the north and thus is not subject to extremes of light or heat. See where we hang our pots and pans! Our chef at the left over there, Roger Ducharme, used to work out in the finishing plant. Arthur Lanney, second cook, and William Adams back there at the salad table are also former plant men."

7 "THE DISHWASHING ROOM, located by the side screen-door exit from the dining area, receives trays of dirty dishes laid through onto the cleaning counter by our customers as they leave the cafeteria. Frank Pesce is scraping while Herbert Adams is stacking dishes in racks that run slowly through the dishwasher."

8 "MOBILE TRUCKS receive the washed and scalded cups, saucers, plates, and trays so they can be pushed back for storage at the service counters. Eating and cutting surfaces of forks, knives, and spoons are not touched by hand after washing, but are stacked in one direction only, in utensil trays. This man's name is Fred Souza."

3 "THESE TWO service counters allow for rapid serving of orders. We serve ample portions. Second servings are available, but hardly anyone ever seems to feel the need for more food. Cashiers figure tray costs quickly so that diners can get right to work enjoying themselves at any table they like."

6 "SEEN FROM the elevator-entrance end, the pot-and-pan scrubbing unit under the windows at the left is more in evidence. The overhead circulation system, of course, serves to draw off any odors resulting from cooking in the Fryolators or the ovens. Notice the air near us has no kitchen odor to it."

Theoretical Menu and Quantities Cooked and Consumed Day Shift, Any Day, Any Month, 1951

	Produced	Consumed
Pea soup	3 gal.	x cups, y bowls } 3 gal.
Roast beef	165 servings	155 servings
Fish cakes	45 servings	43 servings
Baked beans	2½ gal.	2 gal.
Green Peas	6 gal.	5¾ gal.
Mashed potato	5½ gal.	5 gal.
Gravy	2 gal.	1¾ gal.
Fruit-salad plate	6 servings	5 servings
Tuna-salad plate	30 servings	28 servings
Chocolate cake	56 servings	50 servings
Apple pie and cheese	77 servings	70 servings

36 Questions and Answers On How Mt. Hope Finishing Co. Operates Its Cafeteria

1. How many employees do you have on all shifts?
   725.
2. Do second-shift workers get the same menu as the first shift?
   Absolutely.
3. How about the third shift?
   We don't have any third shift.
4. Do you have any canteen or mobile food wagons in operation also?
   No.
5. How many employees use the cafeteria each day?
   410 per day average.
6. What are the lunch-hour schedules?
   7:15 to 8:00 a.m. for quick breakfasts.
   12 noon to 1:00 p.m.
   10:00 to 10:30 p.m.
7. What are the dimensions of the dining room?
   100x80 ft.
   Of the kitchen?
   80x20 ft.
   Of the dishwashing room?
   40x20 ft.
8. In every way, do you have the space to do the job required at all times?
   Yes.
9. In your monthly operation, do you run any losses beyond overhead?
   No.
10. What is your labor cost per sales total?
    40%. We pay mill wage rates to our cafeteria help. These rates are higher than those in public restaurants generally. However, we do not charge public-restaurant prices either.
11. What kind of dishes do you serve your meals on?
    We use Buffalo china plates for serving main dishes to our customers. We serve water and milk in paper cups and thus eliminate all glassware. We use small paper plates for bread and hot roll servings, and provide paper napkins. Hot drinks are served in home-style coffee and tea cups and saucers.
12. How much did the company invest in the cafeteria installation in the beginning?
    You can figure that out for yourself from price lists that are available from the kitchen-equipment manufacturers whose products in our kitchen you have listed on page 109.
13. When was the cafeteria installed?
    1944.
14. What type of employee feeding did you have before 1944?
    A canteen and a mobile truck that supplemented lunches brought in from the outside.
15. How many cafeteria employees does it take to feed over 400 a day?
    On the day shift we have five full-time men employees and eight part-time women. These latter have regular jobs in the office or in one of the other departments and serve at the counters for 15 min. and at the cash registers in return for a free meal each. We figure 2½ men on food preparation, one on food service, one on dining-room sanitation and maintenance and dish-washing, and half a man's time on pots-and-pans washing. →

16. **And at night, for the 75 or so balance of the 400 total, that you feed from 10:00 to 10:30?**
We use one full-time man and five part-time men. The full-time man spends three-fourths of his time in food preparation and one quarter in kitchen and counter clean-up. Three part-time men work the counters and cash register for free meals, and the other two do dining-room clean-up and dishwashing.

17. **How do you train your cafeteria help?**
We pick likely looking people right out of the mill. We prefer they have no previous restaurant experience so that they will learn and abide by our sanitary methods and job procedures.

18. **Of what use costwise are bus boys?**
We don't have any bus boys. After they have finished their meal, diners just take their used trays to the dishwashing room window on their way out the front door.

19. **How many people can a cashier take care of per minute?**
From 10 to 12.

20. **In case of an emergency in which you had to feed twice as many people as now, how would you work it so that employees wouldn't have to stand in line waiting to be served?**
We'd stagger our lunch and supper periods.

21. **During your 12 to 1 lunch period, for example, does the whole mill shut down?**
No. Employees are given about half an hour to eat. On continuous-process jobs, one man goes to eat at 12, then returns in time to let his alternate get a meal at 12:30.

22. **How about carry-out service for mid-morning and mid-afternoon snacks?**
Very little of this is done, and it is not encouraged. Some bring to the job a little something from home if they feel the need for a 10 o'clock breakfast. Most would rather save up and eat well at the regular time.

23. **What do you sell in vending machines?**
Cigarettes only. Smoking is allowed in the mill, you know. Cigars and candy are available at the cash register counter at the end of the cafeteria service line.

24. **Don't you have any mobile food units going through the plant?**
No, there is not sufficient demand for them any more.

25. **Is the cafeteria open for a mere cup of coffee at any off-hour or hours?**
No.

26. **Are there any recreational facilities that go along with the cafeteria service?**
Two amplifying-system speakers are located in the dining room. FM music and news broadcasts are piped in, not too loudly, during eating periods. A man or woman can be paged on the public-address system. And we have a piano, as you see over there.

27. **Is the cafeteria available for employee or civic groups, or for dances?**
Yes. Banquets are held here. And the glee clubs practice here, sitting or standing around the piano.

28. **What role does the cafeteria play in setting up out-door parties for big groups of people in the community?**
We don't have clambakes in the cafeteria, but we do the food buying for some of the groups. We lend equipment. The only things we charge for are the ingredients used in preparing the meals. We donate all our labor.

29. **Where did you find room to locate the cafeteria so centrally on the second floor?**
This building was built in 1917. It was a storage area for open stock, finished cloth in bins, to be exact. The installation of our 3,000-ft. conveyor out in the plant played a big part in making this area available.

30. **Let's get back to employee feeding again. How do you handle sanitation specifically?**
It's simple. One, we take green help out of the mill. Two, we give them a full course in personal and cafeteria cleanliness. Three, we set up and follow daily, weekly, and monthly cleaning schedules around the area. Four, we check thoroughly and supervise closely the conditions of each item on that schedule. And five, I make a personal "dirt inspection" over weekends.

31. **How do you maintain these sanitary habits among your employees?**
It's all a matter of constant supervision and weeding out of any suggestions of a bad habit as soon as it appears.

32. **Do you feed any school children in the cafeteria? Are they welcome?**
Any time they want to come. Any child at all in the community. They pay regular rates for their meals. Almost any noon you can see three to six of them in here, well behaved and apparently happy.

33. **Does employee feeding on the second shift cost more than first-shift feeding?**
Yes. We have almost half the number of employees in the cafeteria, yet serve only about 75, as against 325 or so at noon. The employees understand our problem and so use only one half of the dining area at night. This considerate attitude makes the night clean-up job easier and less expensive.

34. **Roughly, what percent of the plant employees usually bring their own lunch from home or have it brought to them at meal time?**
40 to 45%. This leaves us about 55 to 60% that use the cafeteria facilities fairly regularly.

35. **We have been given figures that indicate that about 63% of textile-mill employees in general patronize in-plant food services. How do you think your 56½% patronage of yesterday compares with this higher U. S. average?**
Very well indeed. Vending machines and mobile units are always easier to obtain patronage with than cafeterias or other sit-down service.

36. **Everything seems to dovetail so nicely in your set-up here. You must have a budget-control system. Would you explain it briefly?**
Yes. Again, it's very simple. Food preparation is a production job just like weaving or finishing. The same factors in the job must be watched carefully so that you give full quality without wasting money. Here are five things we do here:
1. Keep our controllable costs down as much as possible.
2. Never sacrifice on the size of portions served.
3. Buy the best of everything.
4. Make out carefully and analyze the monthly total expense sheet as against the number of meals served.
5. Evaluate the company's quarterly cafeteria expense record against the three most recent monthly operating sheets.

Cloth-Defects Reference Chart Copyright 1951 by S. C. Veney	Winding and Throwing																							
	Flyer too light	Flyer too heavy	Flyer laced wrong	Unbalanced tension, doubling	Soiled equipment, hands	Uneven drying	Winding wet yarn	Cut guides, flyers, travelers	Spindles or idlers unbalanced	Underwound ends	Uneven soaking	Code mixture	Tension variations	Twist set improperly	Wrong tint	Humidity variations	Yarn strikes separators	Excess. tens'n variat'n, full to emp.	Traverse building unevenly	Weak spindle swing	Poor belt splicing	Bobbin rides high on spindle	Waste on machines, operators	
Bands, filling	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Barre						●	●				●		●	●	●									
Broken picks		●						●									●							
Drag-ins														●										
Ends break (edges)																								
Ends break (warp)																								
Ends loose																								
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Filling mixtures												●												
Filling overstretched			●			●	●									●								
Flashes, soiling					●																			
Floats																								
Hang picks																								
Knots, soiled																								
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Picks, tight																								
Picks, loose																								
Spread marks																								
Stickers																								
Shiners							●									●								
Snarls (filling)																								
Soft warp (fuzzy)																								
Tear drops																								
Warp streaks	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Warp strips								●									●							
Warp reedy																								

49 CLOTH DEFECTS–
And What May Cause Them

Charts list most cloth defects common in weave rooms and indicate remedies in –

- Weaving
- Warping
- Quilling
- Slashing
- Winding or throwing

Cloth-Defects Reference Chart

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	Winding and Throwing																							Warping										Sl					
	Flyer too light	Flyer too heavy	Flyer laced wrong	Unbalanced tension, doubling	Soiled equipment, hands	Uneven drying	Winding wet yarn	Cut guides, flyers, travelers	Spindles or idlers unbalanced	Underwound ends	Uneven soaking	Code mixture	Tension variations	Twist set improperly	Wrong tint	Humidity variations	Yarn strikes separators	Excess. tens'n variat'n, full to emp.	Traverse building unevenly	Weak spindle swing	Poor belt splicing	Bobbin rides high on spindle	Waste on machines, operators	Transfers tied faultily	Cut tensions	Stop motion not working	Drive drum slips on warp	Uneven tension	Packages not centered	Mixing skinny and full packages	Tying wrong knot	End wrapped around bracket	Machine not operating right	Warp too wet	Warp too dry	Over-sized	Under-sized	Ends crowded in comb	Tension too low
Bands, filling	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																	
Barre						●	●				●		●	●	●																								
Broken picks		●						●									●																						
Drag-ins														●																									
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Ends break (warp)																								●	●	●	●				●		●			●	●		
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Snarls (filling)																																							
Soft warp (fuzzy)																																		●			●		
Tear drops																																			●	●			●
Warp streaks	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●			●	●	●									
Warp strips								●									●							●	●		●		●		●	●	●						
Warp reedy																																			●		●		

49 CLOTH DEFECTS–
And What May Cause Them

Charts list most cloth defects common in weave rooms and indicate remedies in –

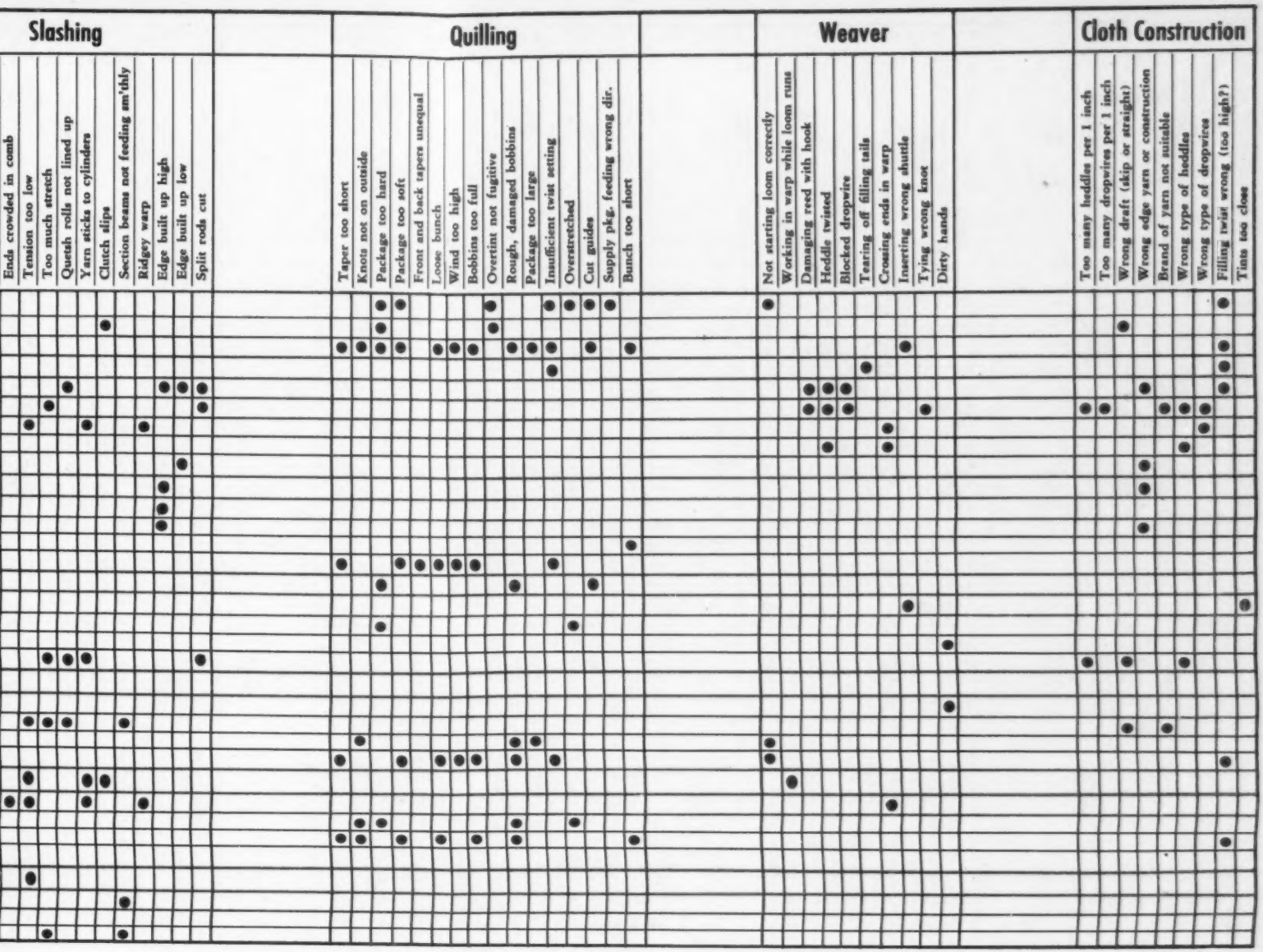
● Weaving ● Warping ● Quilling ● Slashing ● Winding or throwing

THE CLOTH-DEFECT CHARTS on these pages will help your loomfixers in their never-ending task of tracing defects that cause seconds. They will be particularly useful for your loomfixer trainers and trainees.

On this side of the sheet are listed 33 types of cloth defects that may be caused by a condition in winding or throwing, warping, slashing, or quilling; may be caused by the weaver; or may be a fault inherent in the cloth construction.

On the reverse side of this sheet are listed 49 types of cloth defects that may be traced to one or more of 107 conditions, most of which are the loomfixer's responsibility.

The chart for loomfixer's reference was first published in the July, 1943, issue of TEXTILE WORLD. In the



eight years since that time, requests for reprints have not stopped coming in. We're still getting them.

Because of the continuing interest in the chart, the originator, S. C. Veney, has revised it to include more defects and more causes and has also traced many of the causes beyond loomfixing to conditions in earlier processes.

We believe you will find many uses for these charts. Some that come readily to mind are:

1. CHECKLIST FOR FIXERS, trainers, operators, and trainees in the various departments listed.

As you well know, recognizing a defect and knowing instantly the things that are likely to cause it is one of the marks of skill. It can reduce machine down-time, save parts and waste, and give your fixers and operators valuable self-confidence.

2. TRAINING TIME FOR TOP SKILL should be reduced by trainees who keep this chart tacked to their toolbox lid, or in some other convenient place. Top skill comes only with long experience. While the experience is being gained, this chart can be a valuable guide in running down and correcting causes of cloth defects.

3. COOPERATION AMONG THE DEPARTMENTS listed can be given a real boost if overseers will take a little time to go over the charts with supervisors, fixers, operators, and trainees. A little imaginative use of these charts will impress on everyone concerned the fact that his or her job ties in with later processes.

4. YOUR OWN EFFICIENCY and knowledge will be increased by careful study and use of these charts. Very few, if any, mill men know all the machines and processes covered by these charts accurately enough to put their finger immediately on all defect causes. Here, in convenient form, is a "looking-up" place that you undoubtedly will find useful for years.

NO REPRINTS

Because these charts are copyrighted by the author, S. C. Veney, we cannot provide reprints of them. However, we will be happy to put anyone desiring reprints in touch with the author.

Loomfixer's Cloth-Defects Reference Chart

Copyright 1951 by S. C. Veney

	Warp ends ride lay	Harness staggered wrong	Harness timed wrong	Warp shed uneven	Shuttle not uniform	Shuttle tension	Shuttle condition	Shuttle pins cut	Shuttle rings cut	Shuttle porcelains cut	Shuttle spindles out of line	Shuttle fur worn, trimmed badly	Magazine set incorrectly	Plunger not working correctly	Box gate sticking	Shuttle release sticking	Shuttle checks incorrectly	Pickers rough or worn	Check picking mechanism	Mixed shuttles	Picking power incorrect	Box-binder-hole worn	Box-binder-pin worn	Box-binder-lining worn	Picker-rod out of line	Warp tension	Reed has high dents	Reed bent	Reed has weak dents	Reed ends and boxes out of line	Reed too springy	Lay covering in bad shape	Picking tims out	Picker stick worn	Filling feeler set improperly	Short circuit	Picking sweep too long	Center fork not set right	Feeler tips rough	Ends in edge entered wrong	Temples set incorrectly	Reed damaged	Edge tension wrong	Yarn damaged	Loose warp ends	Float	Warp ends run from spools	Warp ends crossed	Warp ends, extra lap on beam	Heddles tight or damaged	Reed, insufficient airspace	Reed, too much airspace
Bands, filling																																																				
Bang-off		●	●	●		●												●	●		●	●	●	●	●	●	●					●			●																		
Barre																																																				
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Broken picks					●	●	●	●	●	●	●	●						●		●	●	●	●	●	●												●																
Center loops						●						●					●			●																●	●		●														
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Cracks	●	●	●																						●	●		●																								
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Edges turned over						●														●																●	●		●										
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Reedy warp																										●	●	●																						
Shuttle flies out			●	●	●												●	●	●	●	●	●	●	●	●	●	●				●		●						●										
Shuttle turns over													●	●	●	●																								●										
Shuttle strikes fork			●														●	●	●	●	●	●	●	●	●	●	●												●										
Shuttle skips shed		●	●	●													●	●	●	●	●	●	●	●	●	●	●				●		●						●										
Shuttle marks		●	●	●	●												●	●	●	●	●	●	●	●	●	●	●				●		●						●										
Spread marks																									●																								
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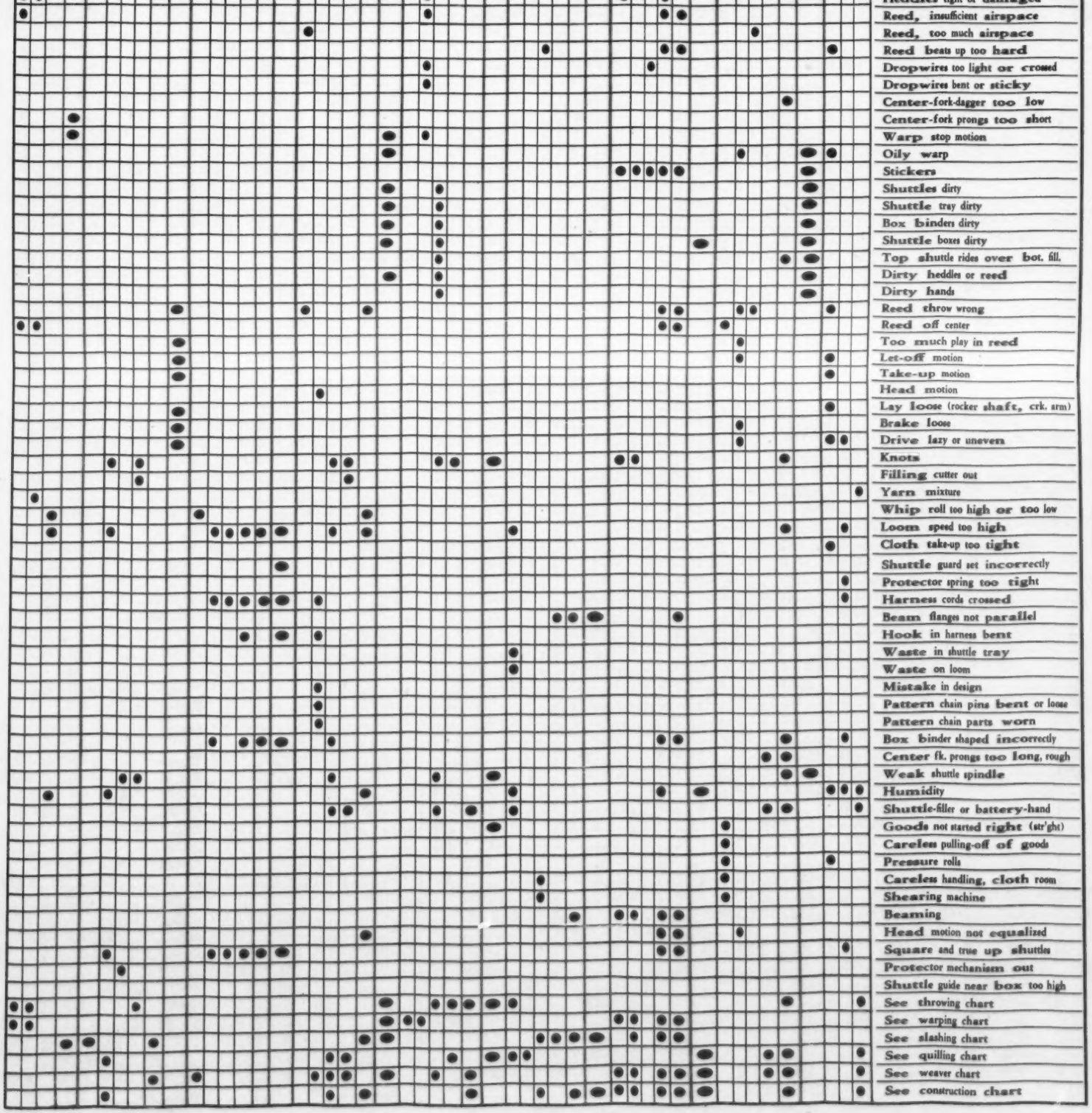
Shiners						●			●	●	●																																						
Smash							●																																										
Snarls (filling)			●		●	●					●	●					●			●	●	●	●	●																									
Soft warp (fuzzy)	●																								●																								
Stopping off						●											●		●	●					●																								
Tear drops			●																						●																								
Warp streaks																										●	●	●		●																		
Warp strips	●		●				●												●		●	●	●	●	●	●			●	●	●	●	●								●	●		●	●		●		●		●	●


Reed, insufficient airspace
Reed, too much airspace
Reed beats up too hard
Dropwires too light or crossed
Dropwires bent or sticky
Center-fork-dagger too low
Center-fork prongs too short
Warp stop motion
Oily warp
Stickers
Shuttles dirty
Shuttle tray dirty
Box binders dirty
Shuttle boxes dirty
Top shuttle rides over bot. fill.
Dirty heddles or reed
Dirty hands
Reed throw wrong
Reed off center
Too much play in reed
Let-off motion
Take-up motion
Head motion
Lay loose (rocker shaft, crk. arm)
Brake loose
Drive lazy or uneven
Knots
Filling cutter out
Yarn mixture
Whip roll too high or too low
Loom speed too high
Cloth take-up too tight
Shuttle guard set incorrectly
Protector spring too tight
Harness cords crossed
Beam flanges not parallel
Hook in harness bent
Waste in shuttle tray
Waste on loom
Mistake in design
Pattern chain pins bent or loose
Pattern chain parts worn
Box binder shaped incorrectly
Center fk. prongs too long, rough
Weak shuttle spindle
Humidity
Shuttle-filler or battery-hand
Goods not started right (str'ght)
Careless pulling-off of goods
Pressure rolls
Careless handling, cloth room
Shearing machine
Beaming
Head motion not equalized
Square and true up shuttles
Protector mechanism out
Shuttle guide near box too high
See throwing chart
See warping chart
See slashing chart
See quilling chart
See weaver chart
See construction chart

Loomfixer's Cloth-Defects Reference Chart

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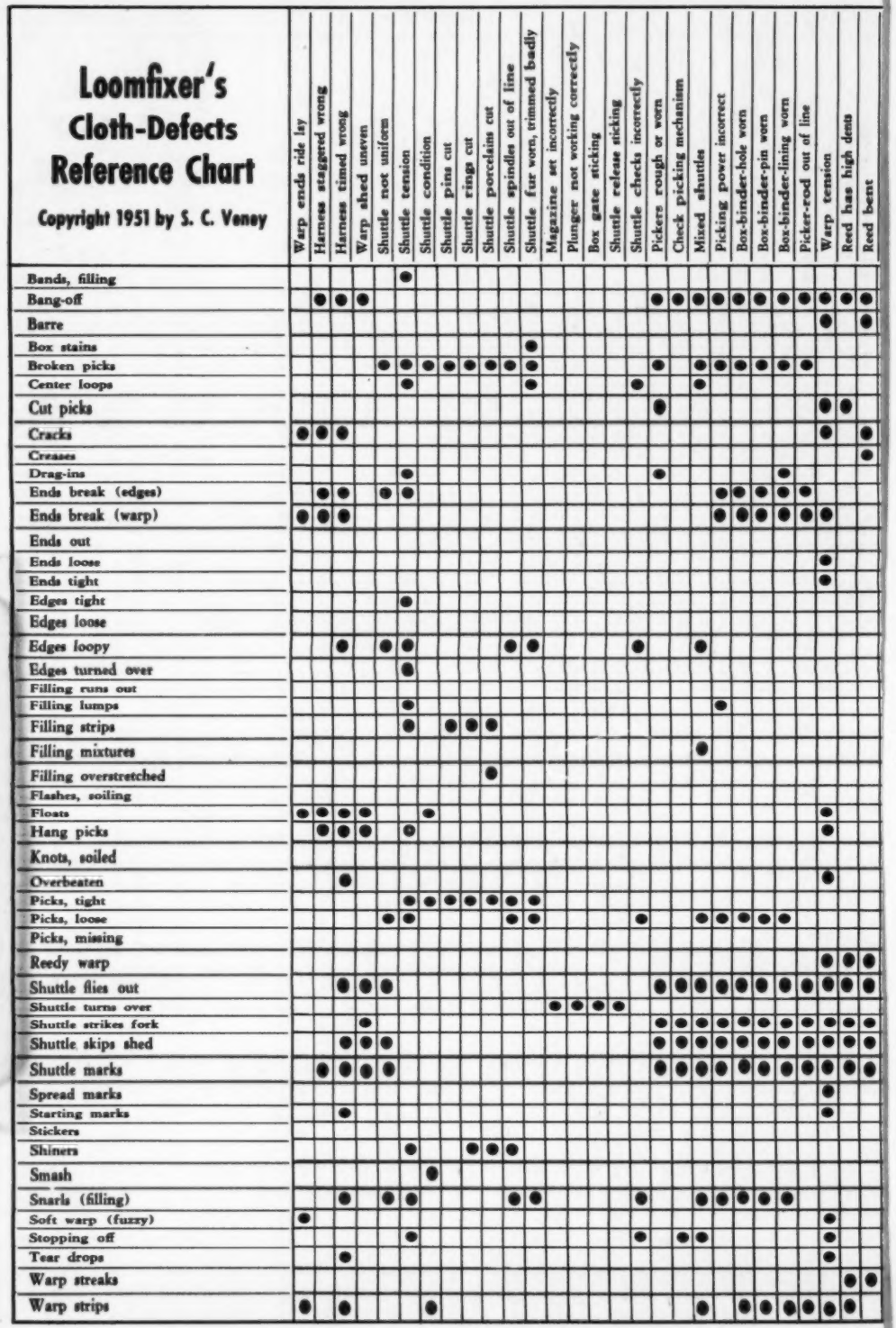
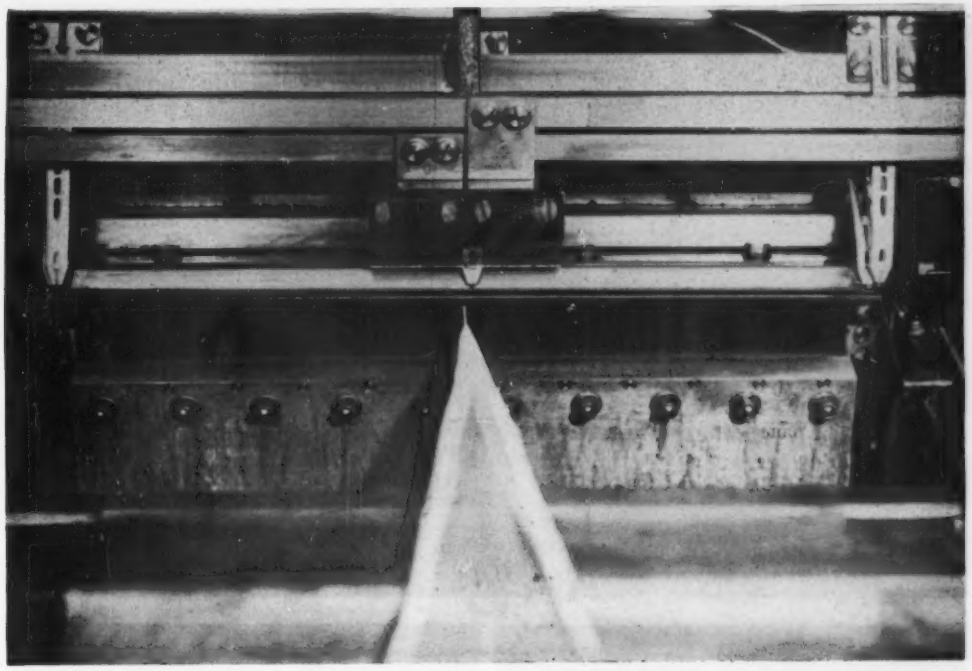




THIS 60-GAUGE LOOPLESS TOE, held by twelve needles, is ready to be pressed off.

LOOPLESS-TOE Hosiery
Saves 10 to 15¢ per Doz.

▶ ***Chief advantage of the loopless-toe hosiery construction is the elimination of the looping operation, but there are several others.***

▶ ***A good fixer can convert a late-model Reading machine to this construction in a day and a half, the Kalio in a day.***

By H. B. LeFAUX,
Consulting Editor, TEXTILE WORLD; Superintendent, Vanette Hosiery Mills

A LOOPLESS TOE means simply a hosiery toe that does not have to be put through the looping operation. It is knitted by a method of continued narrowing beyond the standard looping line so that the finished stocking has a round knitted toe instead of a square looped toe.

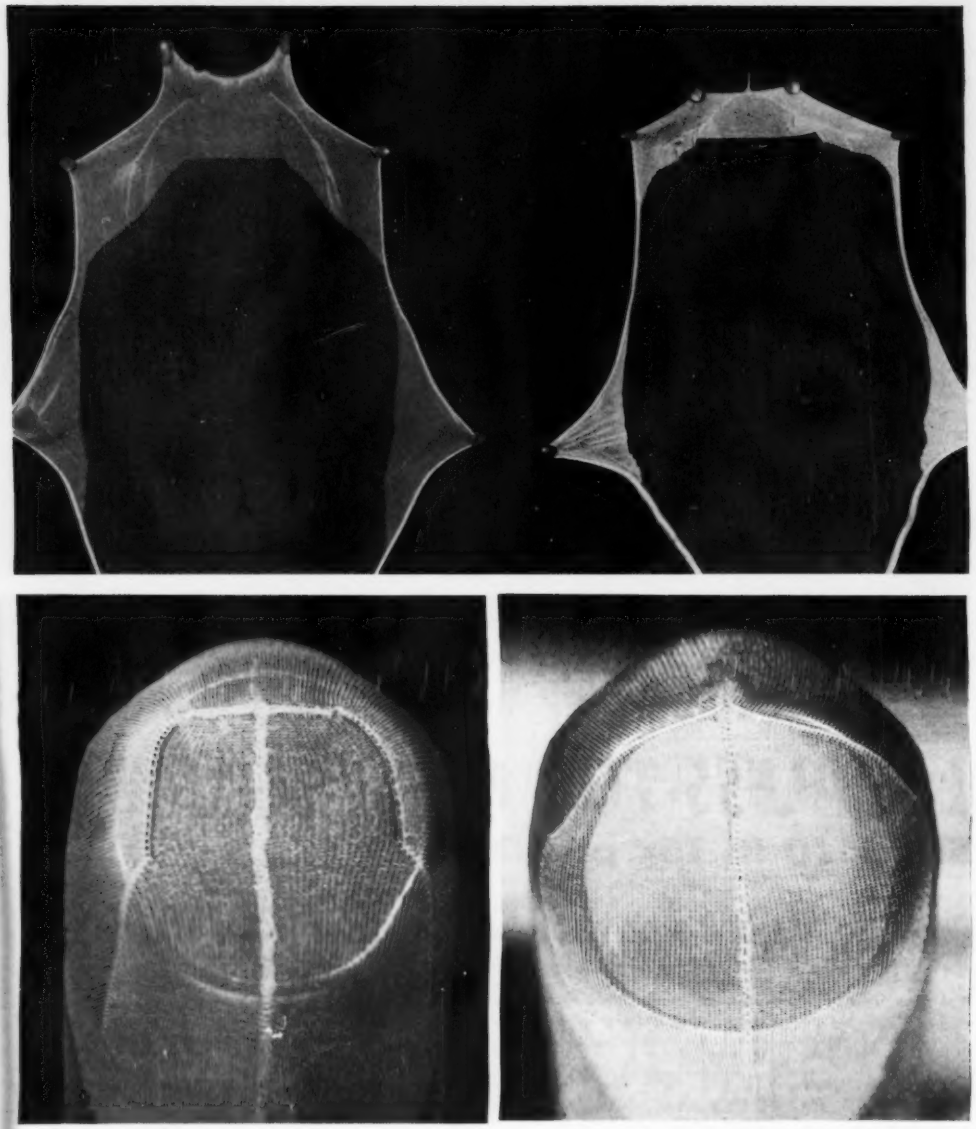
It's not new. It originated in Germany about 1908, and the construction discussed here was patented by Julius Kayser & Co., Brooklyn, N. Y., about ten years ago. However, it is only since the war that it has promised to become an important production factor in the industry.

Besides making it possible to produce a stocking more cheaply, this construction relieves a labor-supply and labor-training problem because it makes looping operators unnecessary.

Certain problems are also created. The most serious one is what to do with your present looping operators when you change over to loopless toes. This is only a temporary problem, of course, because these operators can be used as a labor pool to fill your normal employment needs.

Another problem is the mechanical job of making the necessary machine changes to permit continued narrowing and proper seaming. This problem is a relatively minor one. New full-fashioned hosiery machines are now built with the loopless-toe attachments as standard equipment, and seaming machines now have special uncurler attachments for use on this type of hosiery construction. Exact information on how to convert your present machines to loopless toes is available directly from the machine manufacturers.

A third problem is training fixers, knitters, seamers, and inspectors in the new techniques required for this construction. Since the change is small, this problem is not a serious bother.



LOOPED AND LOOPLESS TOES. In the looped-toe construction on the left, narrowing stopped at the looping line and the stocking was looped straight across to make a square toe. In the loopless construction on the right, narrowing continued to give the stocking a round knitted toe.

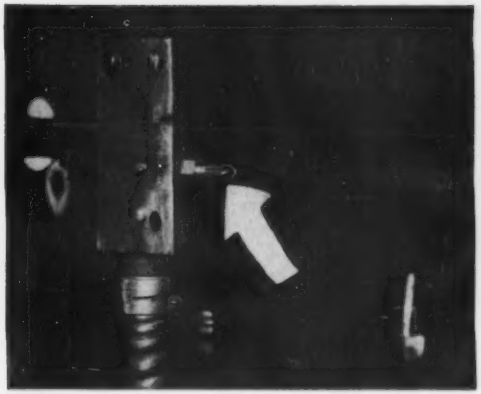
Knitting details:

51 gauge—Set the last narrowings so that the machine dips every course, with the single-needle pull-back arrangement operating.

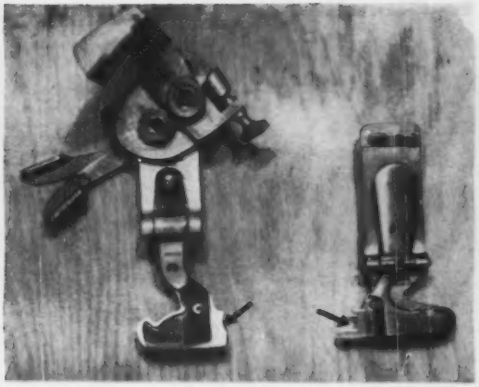
The tab after narrowings should be eight needles wide.

60 gauge—Set the last 62 narrowings so that the machine dips every course, with the single-needle pull-back device in operation.

The tab after narrowings should be twelve needles wide.



JAMMING of narrowing fingers and carrier racks is prevented by a micro safety switch installed on the end of the narrowing attachment.



SEAMER UNCURLERS have been adapted to handle loopless toes. The difference in two types is shown here: Singer on the left and Union Special on the right.

Machine-changing details:

Kalio post-war machine

Cut ⅛ in. off the carrier block. This action will permit knitting a toe tab of 12 needles on the 60-gauge and 8 needles on the 51-gauge machine.

Cut the catch bar arm on head No. 17 to allow enough travel for the carrier-arresting arm. (Karl Lieberknecht Co. will loan Kalio owners a jig to help in cutting the carrier rack. When the jig is used, the cutting takes about 4 hr.)

Install a safety switch on the left end of the machine so that the narrowing rod can shut off the machine in case of mechanical trouble during narrowing. This safety device will keep the narrowing fingers from jamming.

Reading machine

Use standard parts—a long shock absorber arm to prevent the shock absorber arm from jamming. Get a complete set of end stops for both ends of the machine. The stops let the carrier racks travel the full distance without bringing the idle carrier into the knitting field.

Move shock absorber cam blocks out to their full 14-in. head.

Repin collars on the shock absorber rods to conform with this new setting of the blocks.

Cut the right narrowing finger on head No. 16 so that it can pass the bracket on the narrowing machine.

Install a new lace lever—if you have a machine with a lace attachment—because the older type lever hits the coupling on the shock absorber rod during narrowing.

How long does it take to convert?

Reading post-war machine—1½ days

Kalio post-war machine—1 day

Both times include making of the narrowing chain.

If you change to "Loopless-toe" knitting, you will--

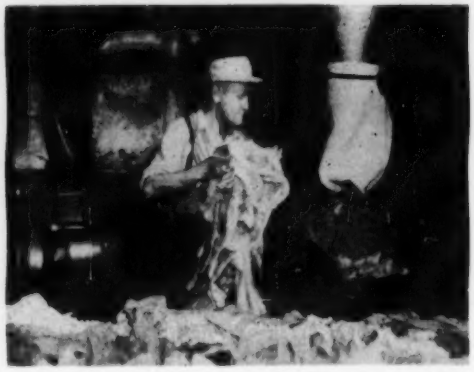
- Eliminate looping
- Save 10 to 15c per doz.
- Have one less handling
- Have better-fitting toes
- Cut out looping "dog-ears"
- Have no loose courses to waste
- Reduce menders
- Get better preboarding and boarding
- Have no loopers to train
- Get the same knitting production
- Get the same seaming production

1. Blending

All blends are laid by hand and treated with an emulsion that contains 3 parts water and 1 part oil. The oil is a stainless, odorless, mineral oil with a penetrant added. The penetrant eliminates the 24-hr. wait that used to be necessary before further processing. Stock is laid in 4-in. layers, and the emulsion is applied with watering cans. Ettrick puts on about 16 qt. of emulsion per 100 lb. of stock.

Ettrick garnetts only wool, alpaca, cashmere and, similar fibers. Stocks processed include thread waste, tailor's clips, and reused materials.

2. Rag Picking



These two rag pickers feed one lumper. Ducts carry the lumps or bits back to the feed table of the rag picker. Picked stock is blown to storage bins.

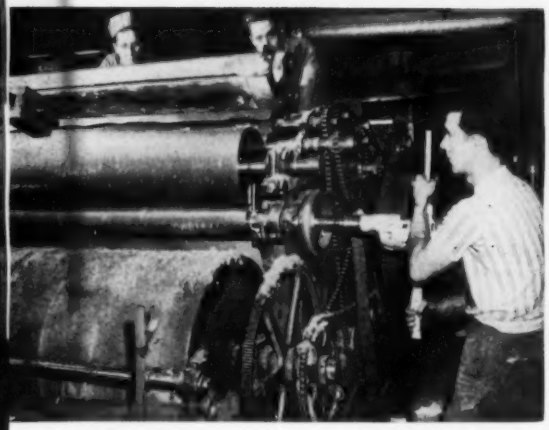
Shredding has replaced rag picking for all rags except gabardines or other tightly woven fabrics. When rag picking is done, it is on a machine with the following details:

Cylinders	20x24 in.
Speed	650 rpm.
Pinning	6,000 to 8,000
Production	150 to 200 lb. per hr.

Two rag pickers feed one lumper that revolves at 950 rpm.

Here's How A Modern Garnetting Plant Operates

By **JAMES H. KENNEDY**, *Southern Editor TEXTILE WORLD*

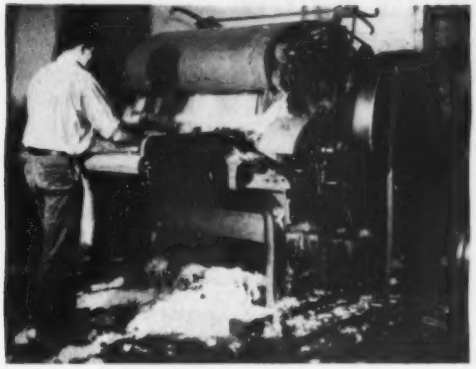


***STRIPPING IS MADE EASY** by the use of an electric hand drill to turn the roll while two strippers work the roll with hand cards. Frequency of stripping depends on the stock being run and the amount of oil on the stock. This three-man team strips a garnett in about one hour.*

Typical Setup for a Five-Cylinder Garnett

Roll	Diam. (in.)	Speed (rpm.)	Wire	Setting (gauge)
Lickerin	12	26	10T	24
Breast cylinder	16	64	12T	28
Traverse roll	6	680	18T	28
1st cylinder	20	240	18T	28
1st doffer	16	26	20T	28
1st fancy	8	1750	18T	28
2nd cylinder	30	246	20T	28
2nd doffer	26	15	22T	28
2nd fancy	11	1340	20T	28
3rd cylinder	30	248	24T	28
3rd doffer	26	15	24T	28
3rd fancy	11	1350	24T	32
4th cylinder	30	244	26T	32
4th doffer	30	14	26T	32
4th fancy	11	1250	26T	32
5th cylinder	30	244	26T	32
5th doffer	30	14	26T	32
5th fancy	11	1380	26T	32
Comb blades		1800		

3. Shredding



This new Proctor and Schwartz shredder is now fed by hand, but it will soon be part of a continuous, mechanically fed system at Ettrick. Production of this machine is about 800 lb. per hr. and takes care of four garnetts.

Shredder details:

Roll	Diam. (in.)	Speed (rpm.)	Wire
Main cylinder	30	250	6T
Fancy	6	1400	#24 Open set Howard Bros.
Doffer	24	50	5T
Worker	8	..	5T
Stripper	4	..	8T

4. Garnetting

Having all combinations of duplex garnetts, Ettrick Garnetting Co. can process any stock according to its requirements. If a soft knitted clip needs action of only two cylinders, the stock is taken off at that point by disconnecting the cross feed. Similarly, stock can be delivered after going through three, four, or five cylinders.

The intermediate cross feed relays and reorients fibers for better blending and opening.

Garnett production varies between 130 and 150 lb. per hr. depending on the stock. Production is checked daily. "If production is low," says Bradley Fuller, assistant superintendent, "we check these points: 1) back section—it may need tooling, 2) lapping on some small roll, 3) fancy and fancy stripper speeds and settings, 4) settings and need of tooling out rolls, 5) feed box—it may be out of adjustment, 6) stock wedged between the main cylinder and the frame."

Mr. Fuller also said that he always watches the chain that goes from the feed table to the arm that empties the feed pan. Improper feeding can result if this chain is not kept tight at all times.

This story is based in part on a talk by William Sharpe, superintendent, Ettrick Garnetting Co., Auburn, Mass. The talk was given recently at the Reprocessed Fiber Course sponsored by the National Association of Waste Material Dealers, Inc., and conducted by the Wool Dept., Lowell Textile Institute, Lowell, Mass.

► *At Ettrick Garnetting Co., Auburn, Mass.:*

—Wool garnetting is carefully adjusted to stock requirements.

—Variable-speed drives are used on doffers.

—Shredders replace rag pickers wherever possible.

► *With the price of raw wool as high as it is today, woolen mills are giving more attention to this secondary source of wool.*

A 6-IN ANGLE STRIPPER is used between garnett sections instead of the usual 4-in. roll. This "kink" eliminates the continuous rolling of fibers around the angle stripper and also gives more stripping surface.

VARIABLE-SPEED DRIVES on the doffers of every garnett allow Ettrick Garnetting Co. to adjust the degree of opening and the machine production to the exact requirements of the stock being run. Lower speeds can often increase production by reducing throwing. Workers and strippers, since they are driven from the doffer, are also subject to the variable-speed control. Use of the variable-speed drive often eliminates resetting the garnett for different stock. Range of the doffer speed is 50 to 70 rpm.

EVERY BAG of garnetted stock that leaves Ettrick has a new paper liner. This practice assures cleanliness and gives Ettrick's stock the finishing touch that it deserves after being processed in this modern mill.

20 Things You Should Know About Textile DETERGENTS

By **SIDNEY M. EDELSTEIN**, *Technical Director, Dexter Chemical Corp.*

- *What is a detergent?*
- *How does it work?*
- *What about anionic, cationic, nonionic?*
- *Will analysis tell you anything?*
- *Will tests evaluate a detergent?*
- *What about builders on detergents?*
- *How about sequestering agents?*
- *Is foaming important?*
- *How do you choose a detergent?*

1

What is a detergent?

For the purposes of textile chemistry, a detergent is a substance dissolved in small amounts in water to improve the cleaning properties of the water. Improvement is by a combination of physical and chemical effects rather than by either one alone.

Soap obviously is a detergent. As normally used in the textile industry, the term "detergent" includes soap and all other detergents made by chemical means. "Synthetic detergents" means all other detergents, except soap, made by chemical means.

2

How does a detergent work?

No one knows completely how a detergent does its work. It is generally agreed that certain actions take place:

a. The detergent causes the water to come in intimate contact with the surface to be cleaned, the dirt on the surface, and the air held by the surface.

b. It causes the liquid to separate the dirt particles from the surface.

c. It holds the dirt particles by electrical attraction so that the dirt is not redeposited on the surface.

3

Is the problem of washing clothes and scouring textiles the same?

No. Clothes usually hold dry dirt. Grease and fatty matter are usually imbedded in the dirt. In textile scouring, the reverse is true: The dirt is nearly always suspended in oil or fat.

4

What properties must a good textile detergent have?

It depends entirely on the material being scoured. For example, high alkalinity in a detergent would be quite desirable, perhaps even necessary, for heavy cotton goods that contained a large amount of grease. For lightweight acetate goods, high alkalinity would be undesirable.

Another example: A detergent highly substantive to proteins may scour cotton fabrics well but exhaust from the bath too fast to scour woolen goods.

The detergent must be selected for properties necessary to do a particular scouring job.

From a paper presented before the Northern New England Section of the American Assn. of Textile Chemists & Colorists.

5

What is the difference between anionic, cationic, and nonionic detergents?

Anionic and cationic detergents, when dissolved in water, both divide into particles having positive or negative charges. In the case of the anionic detergent, the heavy, or working, part of the molecule has a negative charge. In the cationic detergent, the working part of the molecule has a positive charge.

Most textile detergents are anionic. The cationics are usually known as softeners.

Nonionic detergents do not split into particles when dissolved. They resist precipitation.

6

What are the differences between the main anionic detergents?

Generally, the anionic detergents may be classified into a few main types according to the chemical group that makes the detergent soluble.

a. The soaps. The solubilizing group is a carboxylic acid. They clean and scour well when used on the alkaline side. They are not satisfactory in hard water or in the presence of acids and salts.

b. Sulphuric esters, which fall into three groups: sulphated fatty alcohols, sulphated amides, and sulphated esters. These detergents are characterized by good foaming in acid or alkaline solutions, good resistance to salts, and good wetting properties.

c. Alkane sulphonic acids. These are similar in characteristics to the esters, but they show a higher stability to strong acid conditions.

d. Alkylaryl sulphonates, generally of a benzene or toluene nucleus. These detergents are usually inexpensive and have good wetting properties but poor capacity for suspending and deflocculating dirt.

7

Can detergents be evaluated by chemical analysis?

Such an analysis will serve only as a guide to the general properties of a detergent. It is useless as a basis for comparing two different detergents unless they are of exactly the same chemical structure.

8

Can physical tests be used to evaluate detergents?

No. Various tests—such as water-surface tension, inter-facial tension between other surfaces, and dispersing power for umber, iron, and silica—have been applied to detergents. No connection has been found between these factors and the ability of water and detergent to clean.

9

Will wetting tests evaluate detergents?

No. Wetting tests now used are based on the time it takes cotton yarn, tape, or fabric to sink in a solution of the agent being tested. Two agents can be compared only when they are of exact chemical nature. Further, wetting is only one attribute necessary for a good detergent.

10

Can the money value of a detergent be obtained by soiled-cloth detergency tests?

The consensus among practical men is that it cannot. Some of the obstacles are: (a) it is extremely difficult to make a "standard" soiled cloth that can be reproduced from time to time, (b) there are differences in the types of dirt that must be removed, (c) the weave, fabric face, etc., of the cloth have effects on scouring, and (d) laboratory conditions of scouring are so different from processing conditions.

11

Can laboratory tests be developed to evaluate detergents for specific plant operation?

Yes. Conditions that duplicate as nearly as possible plant-processing conditions should be set up. Factors to consider would include ratio of water to goods, mechanical action, time of contact with the detergent solution, rinsing, type of fabric, etc.

12

What is the effect of builders on detergents?

Many alkaline salts—borates, phosphates, silicate, and carbonates—help the detergent action of soaps and synthetic detergents. In many cases, a detergent with a builder is more valuable than a higher active-ingredient content of the detergent alone.

13

Are sequestering agents useful with synthetic detergents?

Yes. Synthetic detergents can be greatly improved in hard water by the addition of sequestering agents. Foaming may not be affected, and the metals may form soluble compounds.

14

What about CMC (sodium salt of carboxy methyl cellulose) as a builder?

Considerable work was done in Germany on CMC, and the results have been borne out to a great degree here. However, we have found its chief value to be as an additive for household detergents based on the alkylaryl sulphonates derived from petroleum. CMC seems of little importance for textile detergents.

15

How important is foaming in textile detergency?

"Possibly the most widely held wrong idea regarding detergents is that detergency is directly related to foaming power." The ability to form high foam is related essentially to certain surface-tension relationships with respect to air. It is not at all related to the ability of a detergent to remove soil or dirt from a surface.

16

What is the place of detergent blends and specialties in textile processing?

This type of detergent product is becoming more and more important. Specific detergent problems vary so much (because of fiber, type of dirt, etc.) that detergents with specific cleaning powers are needed. Very often compounding two or more detergents yields a detergent superior for specific uses. For example, one with good wetting properties combined with one that has good emulsifying and suspending properties may yield a detergent that has all three properties.

17

Do synthetic detergents create new waste-disposal problems?

Yes.

1. Synthetic detergents have strong emulsifying power for many agents, where soap does not. The problem is to destroy this power of the synthetic detergents in the plant's waste liquors.

2. The wetting power of synthetic detergents loosed in a stream remains undestroyed. It affects plant and animal life in that it makes it easier for poisonous materials in the water to penetrate.

18

Do detergents affect fabric strength and hand?

Yes and no, depending on the detergent and the fabric. Alkaline detergents, for example, change the hand, elasticity, and strength of acetate fabrics. They also have decided harmful effects on wool. Wool also has a high substantivity for many synthetic detergents, and the hand of the fabric would be affected by a heavy deposit of the detergent.

19

Is there one best textile detergent?

No. We would be in a mighty tough spot today if we didn't have a wide variety of detergents to choose from. The increasing number of fiber types and blends and the increasing complexity of processing are steadily increasing the detergency problems. To meet the problem of cleaning more and more types of fabrics, we must have more and more detergents with specialized characteristics.

20

How, then, do you choose a detergent?

First of all, use good, sound judgment in evaluating detergency problems.

Then, select detergents or detergent blends that, on the basis of their composition or on the basis of experience, promise to do the job satisfactorily.

Try these detergents and blends under actual plant conditions until a satisfactory one is found.

Effect of Different Types of Dyes On the Newest Acrylic Fiber

1. ACID DYEING—
   a. Increasing the length of time and the temperature of dyeing increases the depth of shade as well as the diffusion penetration.
   b. A low pH (1.4 to 1.2) appears to be best for good exhaustion and penetration.
   c. The use of glaubers salt as a leveling agent has not been indicated as necessary.
   d. Wool absorbs acid dyes more rapidly than Acrilan and thus union-dyeing complications arise.

2. ACETATE DYEING—
   a. The fiber can be dyed at elevated temperatures, but the fastness to light is usually poor. Washing fastness varies from poor to good.
   b. In blends with other fibers, or on 100% Acrilan in light to medium shades when light fastness is not of paramount importance, acetate dyes show promise.
   c. Modified techniques of application will be needed for developed acetate dyes.

3. OTHER DYES—
   a. Not enough work has been done on vat, naphthil, sulphur, and direct dyes to report on in detail.
   b. All classes show promise of being useful, but will require special techniques for best application results.

ACRILAN Has Good Dyeing Potentialities

▶ *Here's a summary of both the laboratory work done to date on the dyeing of Acrilan and the work done on larger-sized beck dyeing of the new fiber.*

By JACKSON A. WOODRUFF, *Textile Research Dept., American Viscose Corp.*

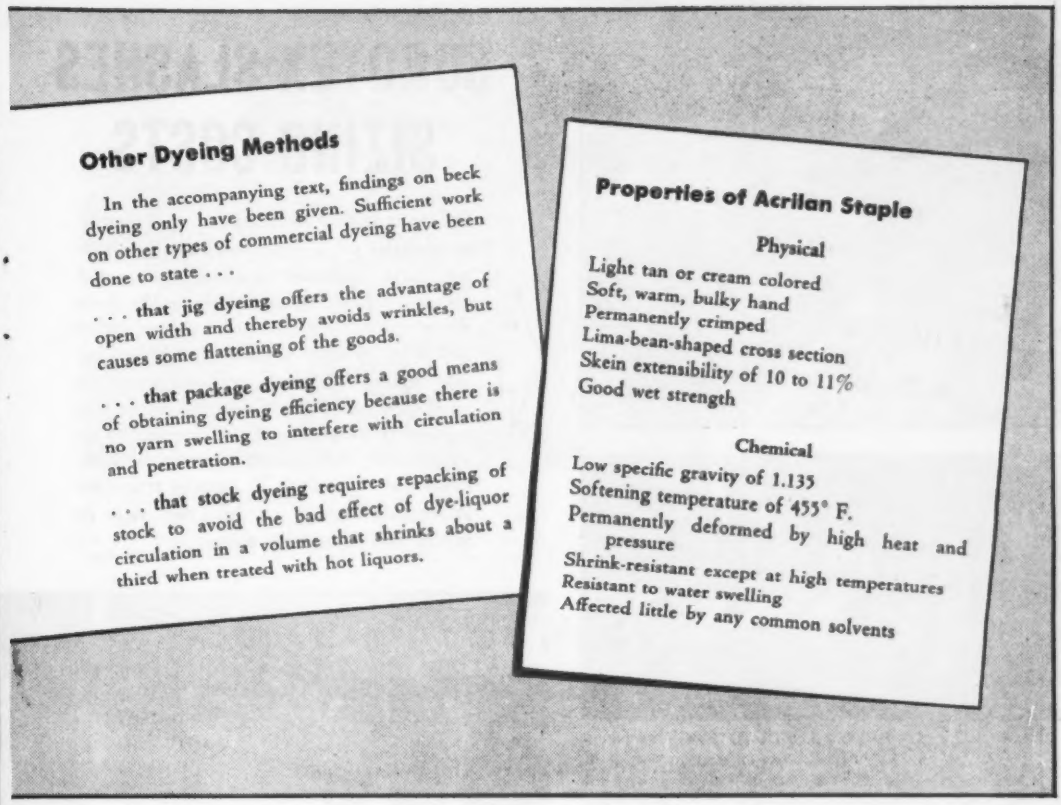
SHIFTING FROM LABORATORY PRACTICE, as summarized above, to bulk dyeings of Acrilan, new acrylic fiber of Chemstrand Corp., brought to light new problems.

Digest of a paper recently presented before the Philadelphia Section, AATCC.

In the first few pieces dyed on the beck, the problem of wrinkles or creases formed in scouring or dyeing was apparent. Naturally, the highest possible temperatures were wanted in dyeing to speed up the exhaustion and penetration, and these high temperatures caused setting of the wrinkles.

Two means of eliminating this condition were found. The first was to preset the fabric by wetting out at high temperatures near 200° F., scouring in the open width, and then later dyeing in the rope.

The second way was to rope-scour the goods and then dry in a loop dryer or clip frame. The goods would then be quite wrinkled and would require a quick steaming in a semi-decater or in a steam frame to remove these marks. Some flattening of the fabric would be done in the semi-decating, but the action in the dye back during dyeing would remove a good part of it.


Other Dyeing Methods
In the accompanying text, findings on beck dyeing only have been given. Sufficient work on other types of commercial dyeing have been done to state . . .
. . . that jig dyeing offers the advantage of open width and thereby avoids wrinkles, but causes some flattening of the goods.
. . . that package dyeing offers a good means of obtaining dyeing efficiency because there is no yarn swelling to interfere with circulation and penetration.
. . . that stock dyeing requires repacking of stock to avoid the bad effect of dye-liquor circulation in a volume that shrinks about a third when treated with hot liquors.
Properties of Acrilan Staple
Physical
Light tan or cream colored
Soft, warm, bulky hand
Permanently crimped
Lima-bean-shaped cross section
Skein extensibility of 10 to 11%
Good wet strength
Chemical
Low specific gravity of 1.135
Softening temperature of 455° F.
Permanently deformed by high heat and pressure
Shrink-resistant except at high temperatures
Resistant to water swelling
Affected little by any common solvents

Scouring and Dyeing Procedure

Assuming a fabric is ready for wet processing, it should be set and scoured in the open width if possible. The scouring agents best suited appear to be non-ionic detergents. The use of anionic or cationic detergents appears to be less desirable, but this conclusion is based on only limited tests.

The open-width scour and presetting operation should be at temperatures reaching to 200° F. and of as long a duration as practically possible. A single pass through a hot bath lasting only a few seconds does not seem to be sufficient to prevent creases from forming later during dyeing in the rope form.

There are several factors that affect this tendency to form wrinkles. The rate of change of temperature of dyeing, the construction of the fabric, the style of beck in use, and other variables will affect the degree of care necessary to avoid this tendency.

After scouring, the fabric is loaded on the beck and the temperature raised to 160° F. There is little, if any, dyeing below this temperature. Therefore the dye can be added at any time during this period. Exhaustion is started and controlled by the addition of acid in small percentages.

Raising the temperature is a second means of control of the rate of dyeing. It has been practical to raise the temperature to 195° F. and add the acid, starting with a ¼ of 1% addition of sulphuric acid on the weight of goods and then with an increase of acid to 10%, with approximately 1% additions each 5 to 10 min. When all the acid has been added, the dyeing is run for 1 to 2 hr. at 195° to 205° F. to obtain penetration of the fibers.

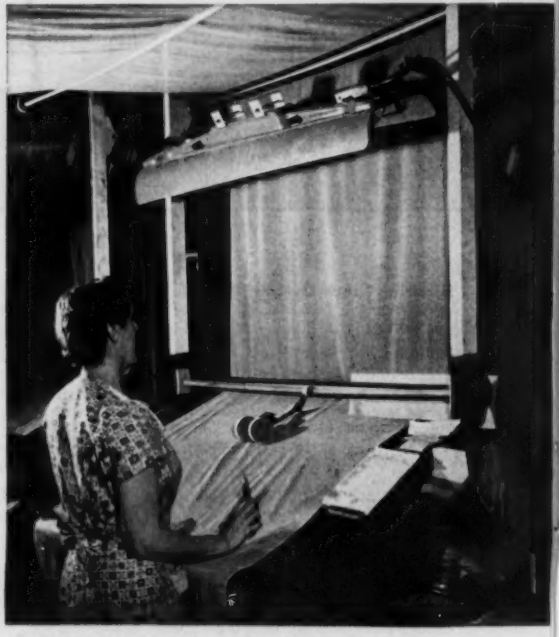
When additions are necessary, the dye bath should be cooled to approximately 170° F. before the new dye is put in. At higher temperatures, the acid present causes quick exhaustion of the dye and consequent unevenness at the folds. Once the acid dyes are absorbed unevenly by the acrylic fiber, it is a difficult job to level them out. Leveling is usually accomplished by stripping and redyeing rather then by prolonged boiling.

When a sample shows that the shade has been reached, the bath should be cooled by the addition of water to overflow. After cooling and rinsing, it is usually recommended that a neutralizing scour of a weak solution of sodium carbonate and a detergent be given. This step increases fastness by the removal of surface dye. Also, in dark shades, it has often been necessary to overdye to a bronzy condition and bring back the desired shade by this neutralizing scour at 120 to 140° F.

SUNOTEX SLASHES SIZING COSTS

SIX YEARS AGO a New Hampshire mill used an emulsifiable oil, a penetrant, and a preservative in the softener for sizing viscose and acetate warps on Johnson slashers. The three size components were expensive, and either had to be dissolved separately or heated before mixing. Moreover, uniformity of the sized warp could not be counted on. A Sun representative suggested all three oils be replaced with "Job Proved" Sunotex RSO-48. Result: an immediate 25 percent reduction in formula costs alone, *plus* new ease in mixing and dependable sizing.

CURRENT PRODUCTION is marquisette for curtains, taffeta for women's wear. Fortisan and Nylon warps, too, have been sized with Sunotex RSO-48—with equally good results.



SUNOTEX RSO-48 SPEEDS WEAVING by protecting ends from breakage by shuttles and preventing build-up of static electricity. It boosts quality by reducing "snowballing" of filaments.

THE MILL CREDITS SUNOTEX RSO-48 for much of its reputation for product quality. In finishing, it scours readily and uniformly from fabric, gives even dyeing—makes production better right down the line.

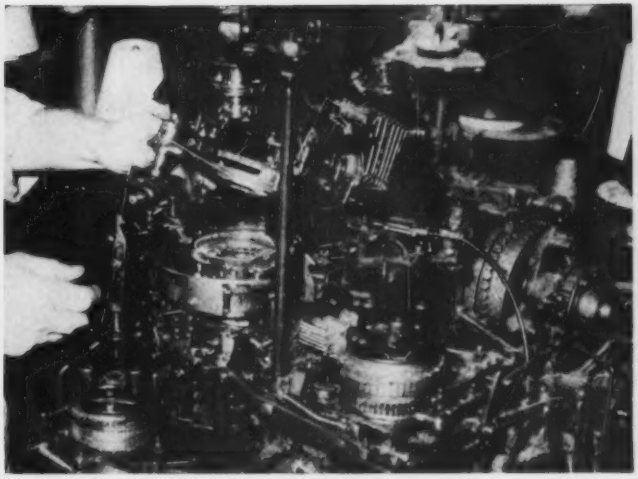
Sun has the right "Job Proved" textile-process aid for every material, every operation.

For the help of a Sun technical representative, call or write the nearest Sun Office.

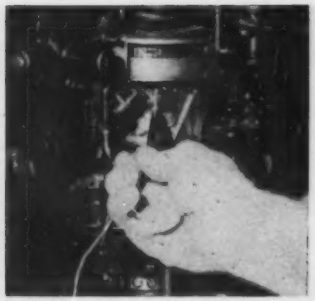
SUN INDUSTRIAL PRODUCTS

SUN OIL COMPANY, PHILADELPHIA 3, PA. • SUN OIL COMPANY, LTD., TORONTO AND MONTREAL

SUNOCO



"PUT YOUR NEEDLES IN RIGHT," Maryon tells its fixers.
"If we don't," the fixers say, "the stitch will tell on us. If the needle is not seated properly, the stitch won't be uniform with the others. If the hook is bent, we'll probably get a long stitch. If the needle is not properly aligned, it will break and cause a bad place in the fabric."



"PICK OFF THE LINT TAGS if they are not blown off," Maryon says.
"If we leave the tags," fixers say, "and they later jar off into the cylinder, they may jam and break the noses off sinkers. Results, of course, are lost time for repairs and a damaged fabric."

FOR ARGYLE KNITTING, Maryon uses a 2½-in. drive pulley to give a machine speed of 160 rpm. A weekly cleaning of the belt face and an application of stick belt dressing keeps the speed fairly constant.

How Maryon Hosiery Mill Maintains KNITTING QUALITY

"We are a small mill; so we concentrate on high-quality specialty products. We knit argyles, children's and infants' anklets, half hose, and five-eighths hose. To maintain the quality we need, we have to stick to a good program."
—T. F. Hirsch, president

MARYON HOSIERY MILL, INC., Carrollton, Ga., knits specialty hose in a wide variety of colors, patterns, and styles. To maintain its market position, the mill stresses constant quality control.

There are so many chances for quality to be lost that Maryon considers careful inspection and supervision at each process to be mandatory. Control therefore extends from yarn selection through knitting, finishing, and packaging; and every employee is thoroughly trained to detect the slightest deviation from standard so that machine adjustments can be made before quality is affected.

One result of the program has been that production has been aided because machine down-time and stoppages have declined steadily. One of the main factors in obtaining high production per machine, Maryon thinks, is accurate machine adjustment and its maintenance through periodic inspections. Timely adjustments go a long way in preventing major trouble or complete shutdowns for repairs and also keep the machines running with less friction and wear of moving parts.

In Maryon's inspection system, each worker acts as an inspector of his own production. Over-all inspection is then made at the examining tables.

At each machine is a set of knitting instructions for each style, color combination, and pattern. These instructions serve as a ready reference source for the knitter to check the goods and the knitting procedure. The chart saves considerable time when a style or color change is carried out.

GOOD CLEANING. Good housekeeping is part of the quality-control system. It is felt that a clean room and clean machines do much to provide additional incentive and add to efficiency. Knitters are responsible for the cleanliness of the machines and the immediate working area.

Each machine is thoroughly lubricated once each shift with a small spray gun that provides even distribution of oil and saves time. The 10-weight oil is applied after the machine has been thoroughly cleaned.

If a particular machine requires more attention than the others, that machine is checked for alignment. Each moving part is inspected for proper adjustment, and points where excessive friction might develop are checked. This procedure is designed to prevent possible cumulative maladjustments that in many instances are difficult to detect.

Teamwork between knitter and fixer has many advantages, Maryon says. For one thing, the knitter, being responsible for his share of quality control, keeps the fixer informed on the operations of the machine and calls for quick adjustment at the first sign of improper knitting.

This Steel-Service Team for Textile Industry Requirements

Convenient to manufacturing centers from coast to coast, thirteen Ryerson steel-service plants stand ready to supply the textile industry and its equipment builders.

True, shortages resulting from the twin pressures of defense requirements and unprecedented civilian demand may make it impossible for us to furnish every item on every order, much as we would like to. But it *is* likely that most of your requirements are among the stainless carbon and alloy steels we have on hand for prompt shipment. And experienced Ryerson steel men are always glad to work with you—help you make the most of available steel.

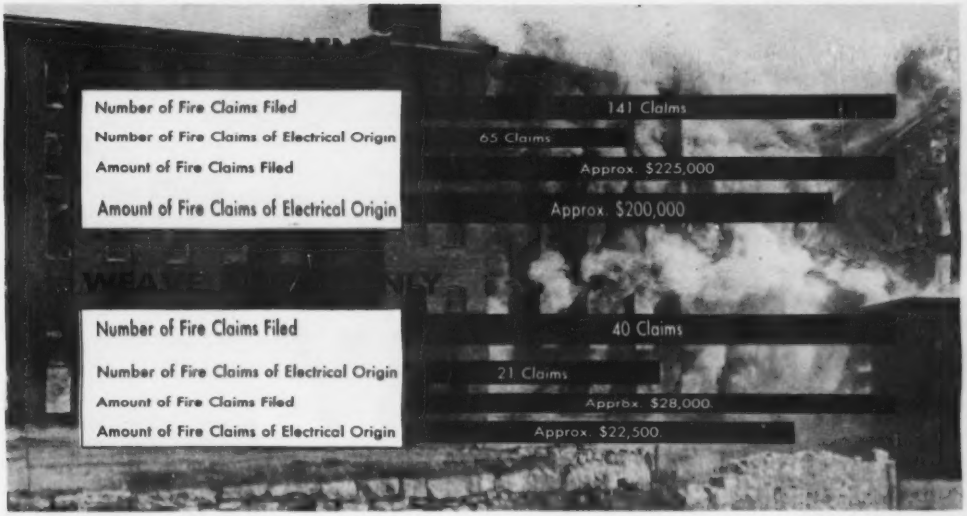
From switchboard to shipping floor all of us are ready to give you prompt service whenever humanly possible. So call us for every steel need.

PRINCIPAL PRODUCTS

CARBON STEEL BARS — Hot rolled and cold finished.
STRUCTURALS — Channels, angles, beams, etc.
PLATES — Many types including Inland 4-Way Safety Plate.
SHEETS — Hot and cold rolled, many types and coatings.
TUBING — Seamless and welded, mechanical and boiler tubes.
ALLOYS — Hot rolled, cold finished, heat treated.
STAINLESS — Allegheny bars, plates, sheets, tubes, etc.
REINFORCING— Bars and accessories, spirals, wire mesh.
BABBITT — Glyco bearing metal, also Ryertex plastic bearings.
MACHINERY & TOOLS —For metal fabrication.

RYERSON STEEL

JOSEPH T. RYERSON & SON, INC. PLANTS AT: NEW YORK • BOSTON • PHILADELPHIA • CINCINNATI • CLEVELAND
DETROIT • PITTSBURGH • BUFFALO • CHICAGO • MILWAUKEE • ST. LOUIS • LOS ANGELES • SAN FRANCISCO

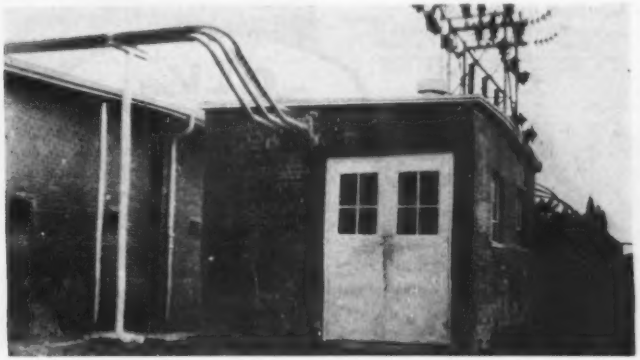

Number of Fire Claims Filed
141 Claims
Number of Fire Claims of Electrical Origin
65 Claims
Amount of Fire Claims Filed
Approx. $225,000
Amount of Fire Claims of Electrical Origin
Approx. $200,000
Number of Fire Claims Filed
40 Claims
Number of Fire Claims of Electrical Origin
21 Claims
Amount of Fire Claims Filed
Approx. $28,000
Amount of Fire Claims of Electrical Origin
Approx. $22,500

FIRES OF ELECTRICAL ORIGIN account for a large proportion of losses. Typical are figures charted above, based on actual claims filed with Factory Insurance Assn. by cotton mills in Virginia and North and South Carolina during 1948. In this group, six of seven cotton-warehouse fires were of electrical origin. Weave rooms had the largest number of claims, almost 50% of which were of electrical origin and accounted for 81% of weave-room losses.

Prevent Tomorrow's Fires By Good Electrical Installations Today

► *Overloaded systems, obsolete equipment, unsuitable controller enclosures, and general misuse and abuse of electrical equipment are causing the curve of textile-mill fires to rise. Here's a list of seven common fire causes and suggestions for their elimination. How does your mill measure up?*

By SWAFFIELD COWAN, *Engineer, Factory Insurance Assn.*

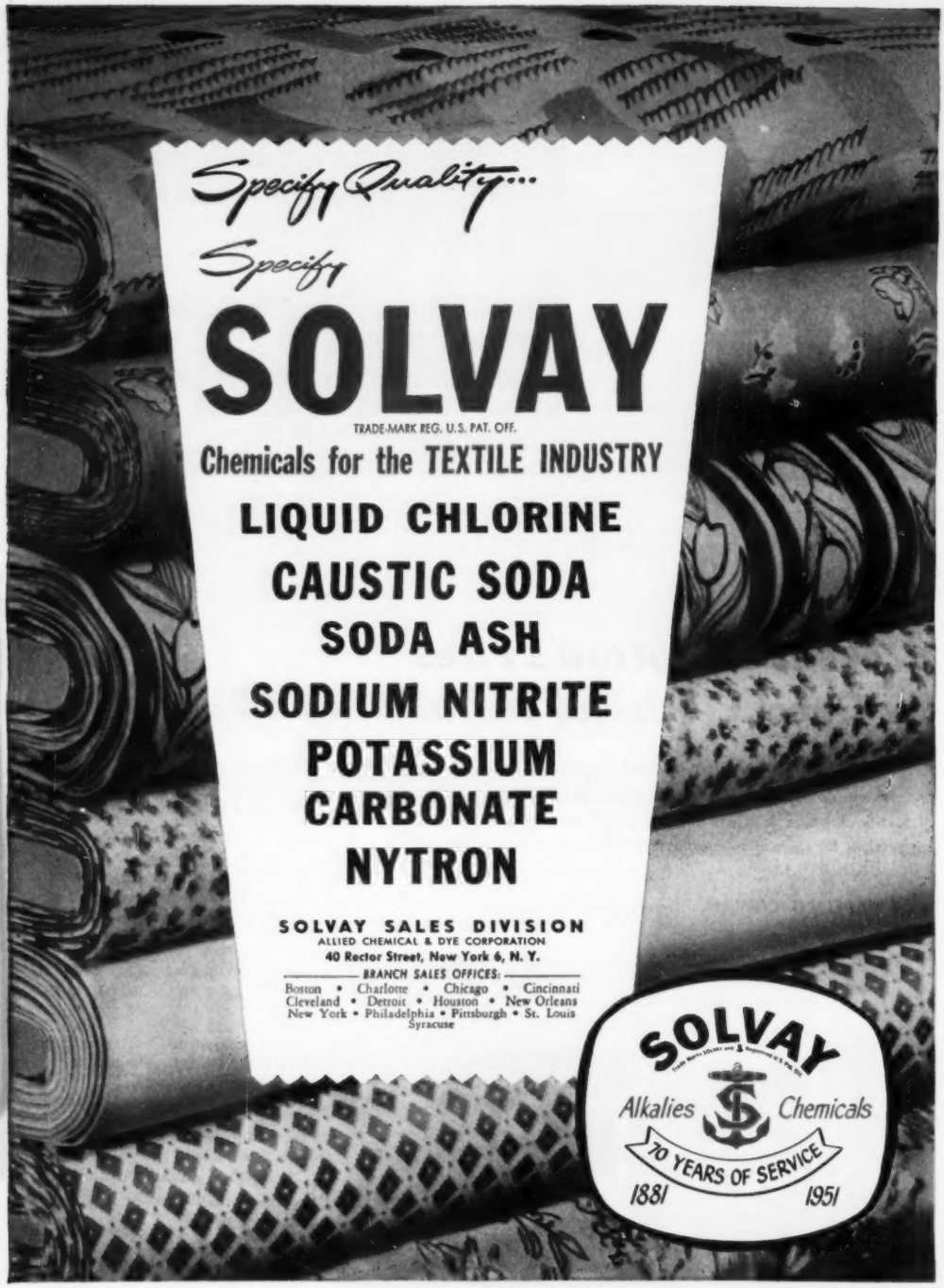


AIR CIRCUIT BREAKERS installed in a fire-resistant room separate from the mill can eliminate fires caused by obsolete oil-immersed circuit breakers.

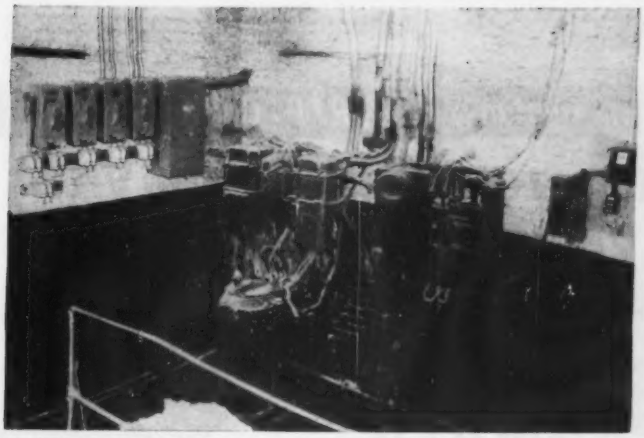
THE INCREASING USE and misuse of electrical equipment is largely responsible for the increase in cotton-mill fires in recent years. Typical abuses are the use of splash-proof motors in dry, linty locations where totally enclosed, non-ventilated, or textile-type motors should have been employed; the continued use of antiquated, obsolete, deteriorated, and even dangerous electrical equipment which should have been replaced years ago; and the installation of spark-producing equipment, such as starters, contactors and switches housed in enclosures not designed to confine sparks or exclude lint, but primarily to protect the user from accidental contact with the live parts within. Last is the mechanical abuse to which such equipment is subjected, combined with the almost complete lack of good electrical maintenance. These conditions can be corrected, but it is going to require a real and continuous effort.

Here's a list of seven common sources of textile-mill fires of electrical

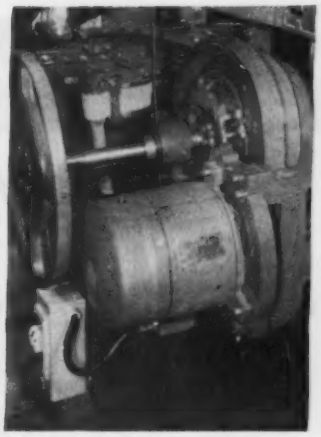
Based on a paper presented at the recent textile-industry conference of the American Assn. of Electrical Engineers, Philadelphia, Pa.



Soda Ash • Caustic Soda • Caustic Potash • Chlorine • Potassium Carbonate • Calcium Chloride • Sodium Bicarbonate • Specialty Cleansers • Sodium Nitrite
Nytron • Ammonium Bicarbonate • Para-dichlorobenzene • Ortho-dichlorobenzene • Monochlorobenzene • Methanol • Ammonium Chloride • Formaldehyde



THE NEW AND OLD in one textile mill are illustrated by the NEMA V (dust-tight) control enclosures at the left and the obsolete open lighting panel (since replaced) that is shown at the right.



OIL-RESISTANT heavy-duty flexible cord can eliminate difficulties of keeping flexible-conduit connections to loom motors tight.

origin and methods of prevention for each that mill men should consider.

Cotton mills generally operate from a 550-v., 3-phase, 60-cycle ungrounded system. From the mill substation, the secondary circuit is frequently run overhead on multiple-circuit, wood-pole lines to a central switchboard room. In some instances, an outside feeder system is used with the transformer secondary extended along one side of the mill buildings and with taps taken off directly to inside feeders. These taps, in a way, might be compared to multiple services. Little regard is given to the number of taps, and frequently they are unprotected, or protected only by small obsolete circuit breakers having very little, if any, short-circuit interrupting capacity.

In many such instances, there is usually no means of isolating the mill on the low-voltage side of the transformers other than the manually operated pole-disconnect switches at the transformers. Once in a while even these switches are removed because of heating under increased-load conditions. In an emergency that requires clearing of the long main feeder, the only safe means would be first to open the numerous feeder services to remove the load, and then to open the disconnects at the transformer. Obviously such an arrangement is not desirable.

FIRE CAUSE #1:

Obsolete Oil-Immersed Circuit Breakers

Older mills that have a switchboard often located it in a corner of the machine shop. It usually consists of a number of feeder-circuit breakers of the oil-immersed type connected to what might be considered as an extension of the transformer secondary bus. Many of these installations are still in use although they have long passed their period of adequacy. Their short-circuit-interrupting capacities have been exceeded by the increased short-circuit power available. Frequently, the feeder loads have been increased, and in some instances uniformed "human gremlins," intending to be helpful, have seen fit to render the tripping mechanism inoperative, sometimes even tying it up with string. Since these rooms usually have a combustible floor and ceiling and the possibility of an oil fire exists, automatic sprinkler protection has been required. One can easily imagine the effect of a severe short circuit within the mill failing to be promptly cleared by one of these "one-horse-shay" breakers that might fail violently with a resultant oil fire. In such an occurrence, the sprinklers would undoubtedly go into action, probably confining and controlling the fire and saving the building. But in the meantime it is quite probable that all of the other switchgear would have been involved, either by fire or water damage, or by subsequent short circuiting and arcing. Very expensive and prolonged shutdown of a plant is often the result.

Solution:

Install Air Circuit Breakers

Where possible, such obsolete equipment should be replaced with a properly engineered installation of suitable air circuit breakers that provide both instantaneous and overload protection. Since air circuit breakers do not involve the probability of an oil fire, it is preferable to locate such equipment in a fire-resistant, cut-off room so that sprinkler protection may be omitted. In such instances, the room should be used for no other purpose than to house the particular switchgear. Many mills, especially where inside space is at a premium, have found suitable outdoor switchgear highly satisfactory. Outdoor switchgear has the added advantage that it is not convenient for use as an unauthorized clothes closet, janitor's room, or storeroom.

FIRE CAUSE #2:

Ineffective Grounding of Lightning-Protective Equipment

Each summer, difficulty is encountered with long, open outside feeders from lightning and lightning surges. Distribution-type lightning arresters have been used on such lines for many years. These were not always effective in reducing the breakdowns within the mill equipment, probably because of ineffective grounding of the protective equipment, and because the difficulty seems to arise largely from surges rather than from direct lightning strokes.

Solution:

Protect Against Surges

In recent years, the application of suitable surge-protection capacitors installed in parallel with the arresters has been advocated. These capacitors have produced marked results in lowering the frequency of disturbances that may occur during lightning storms.

Since the effectiveness of such protective systems or devices is dependent

(*Continued on page 214*)

Booth

Originators of STRIP-O-MATIC *

CARD CLOTHING NEWS AND VIEWS

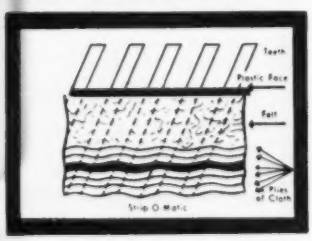
RUNS BETWEEN STRIPPING INCREASED 300%

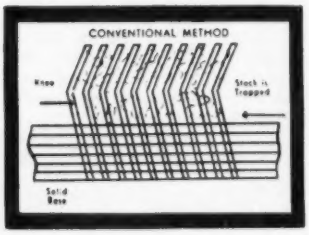
STRIPPING WASTE CUT 70%

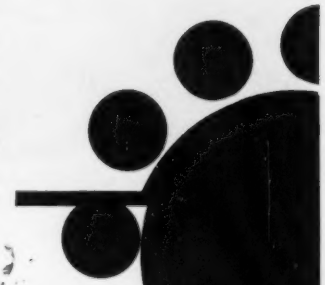
with STRIP-O-MATIC® CARD CLOTHING

The Wm. D. Sykes Company, carpet yarn manufacturers, of Philadelphia, has equipped 4 complete sets of cards, in addition to numerous partially clothed sets, —including cylinders, workers and doffers with Strip-O-Matic Card Clothing. These sets have run beside sets equipped with conventional clothing for nearly a year providing accurate comparison on the same stock.

Mr. Roland Kerr, Chief Carder, reports, "We have to strip on conventional clothing every 30-40 hours; each time we remove approximately 8 lbs. of waste. With Strip-O-Matic we make runs of 100 hours without stripping; then remove only about 2 lbs. of waste. Our stripping waste is reduced substantially with Strip-O-Matic. We run wool, nylon, rayon. The improvement with Strip-O-Matic has been uniformly good. Previously we were seldom able to run a complete dye lot. With Strip-O-Matic we can."







PERFORMAN
FROM MILLS U
STRIP-O-MATIC

A Chester, Penna. nylon spinner who has run Strip-O-Matic a year without grinding reports—"Nylon takes the pitch out of conventional clothing. This doesn't happen with Strip-O-Matic. We save on maintenance."

"We use Booth Card Clothing exclusively and work closely with their representatives to select the types best suited to our particular needs," writes a producer of worsted and hair cloth yarns.

The president of a custom carpet and knitting yarn manufacturer tells us, "Our situation is complicated by the vast number of different shades we run in small lots. While we need to strip between every batch, Strip-O-Matic pays off for us in two ways. First, waste is greatly reduced; second, stripping is quicker and easier. And, of course, our occasional long runs can now be made without stripping."

* Patented ®

Sincerely yours,

E. Allen Knapp Jr

PRESIDENT

Established 1892

Booth

BENJAMIN BOOTH COMPANY, ALLEGHENY AVE. & JANNEY ST., PHILA. 34, PA.

ROPES OF GOODS are run through the dye machines without tension or squeeze rolls to guard against unlevel absorption of color.

"LOT" Production Method Gives More Even Dye Shades

HIGHLIGHTS: *Utica Knitting Co. knits, processes, cuts, and sews by yarn lots—More uniform bleaches and dyes are obtained—Dye process consists of half-bleach, cold saturation, steeping, washing, and rinsing.*

By E. DALTON WHITE, *McGraw-Hill Atlanta Bureau*

PRODUCTION BY LOTS from knitting yarn to finished garment is giving Utica Knitting Co., Anniston, Ala., better control of production and quality, particularly in bleaching and dyeing.

It is a well-known fact that cotton differs from year to year under varying weather and other growing conditions, and these differences cause varying results in bleaching and dyeing. To reduce these variations as much as possible, Utica Knitting sets its production orders in weights and sizes to conform to the cutting schedule. This practice insures that all parts of a garment are knitted from the same yarn lot.

This batching of orders has greatly increased the efficiency of bleaching and dyeing and has made for greater utilization of equipment. Production and quality control are more exacting and effective.

The Utica mill recently installed a number of Tube-Tex units and is installing additional ones as part of its modernization program. All wooden bleach and dye tubs have been replaced with modern stainless-steel units, and stainless-steel cloth trucks are used in many places.

Heavyweight knit underwear goods to be napped are first turned after knitting and then sent to bleaching and dyeing.

All goods to be dyed are first given a half bleach in the tub by the "Becco" cold-bleach process. Goods are cold-saturated in a peroxide solution consisting of 35% hydrogen peroxide, 30-weight silicate, 76% caustic, and a wetting agent.

From the saturator the goods are transferred to transite-lined boxes to steep for 18 hr. Goods are saturated on the night shift and washed out during the following second shift.

WASHING. The washing-out process for all bleached goods consists of:

One 160° F. wash for 30 min.
One 140° F. wash with 1% detergent for 30 min.
One 100° F. wash for 20 min.
Four 10-min. cold rinses

For lightweight goods Tinopal is applied in an additional bath for 20 min. at 120° F. to obtain an extra-white finish.

A fairly rigid time schedule is maintained during this bleaching process to insure uniformity of the batch because parts of a garment may come from different rolls of knit goods.

The same care in bleaching is exercised during dyeing. Uniform tem-

scoop for blitzing bacteria—DOWICIDE PRODUCTS
Bacteria Extracted from Coating Material
Now you can "blitz" bacteria and mold out of your plant, rid yourself of added labor costs, wasted material and the nuisance they cause in the textile industry.
For many years leading textile manufacturers have incorporated Dowicide industrial germicides and fungicides in starch and other sizing materials to get rid of bacteria already growing and to ward off future attacks of these micro-organisms. Time and money formerly spent on replacement batches are saved.
And like these manufacturers, you'll find Dowicide products offer mold and bacteria protection in other processes, too. Warp yarns and gray goods treated with them become mold-resistant; discoloration from dye forming organisms is no longer a threat.
Investigate this accepted means of bringing microbial control into your plant. Dow maintains complete laboratory facilities to help you solve your problems. Contact our nearest sales office or write direct to Midland for additional information.
Use
DOWICIDE
INDUSTRIAL
GERMICIDES and
FUNGICIDES
THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN
New York • Boston • Philadelphia • Washington
Atlanta • Cleveland • Detroit • Chicago • St. Louis
Houston • San Francisco • Los Angeles • Seattle
Dow Chemical of Canada, Limited, Toronto, Canada
DOW
CHEMICALS
INDISPENSABLE TO INDUSTRY
AND AGRICULTURE

MOISTURE IN THE GOODS *coming from the bleach or dye bath is reduced to about 50% on this pressure-roll extractor.*

DRYING TO SIZE *on these drying frames is part of Utica's method for controlling the finished size of its tubular knit goods.*

peratures are maintained during the different processes. It has been found that unless temperatures are controlled there is likely to be color variation in the fabric.

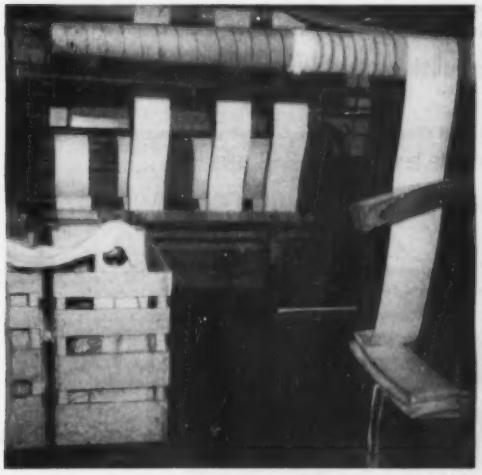
Squeeze rolls are not used during dyeing. It was found that parts of the goods as they pass under the roll may be of two or more thicknesses. Greater pressure would be exerted on the folded goods, and more dye would be squeezed out. The result would be an unevenly dyed fabric.

All machines in the bleaching and dyeing department are thoroughly cleaned each week and the lubrication changed. The dyehouse is washed down daily.

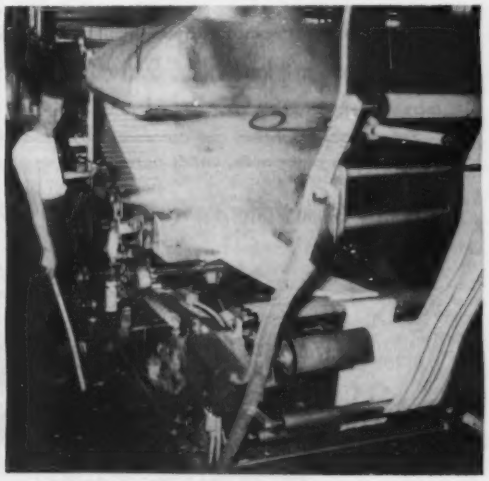
Working conditions were improved by the installation of exhaust fans over each tub. Steam, hot air, and fumes are exhausted through a duct to the outside of the building.

From dyeing or bleaching, all goods are processed through the Tube-Tex unit, which uses pressure rolls to reduce moisture to about 50%. Goods then go to the dryer and napper.

Special care is exercised during calendering to control shrinkage and width and to obtain good folding qualities. Edge drives are set carefully to avoid bowed filling.



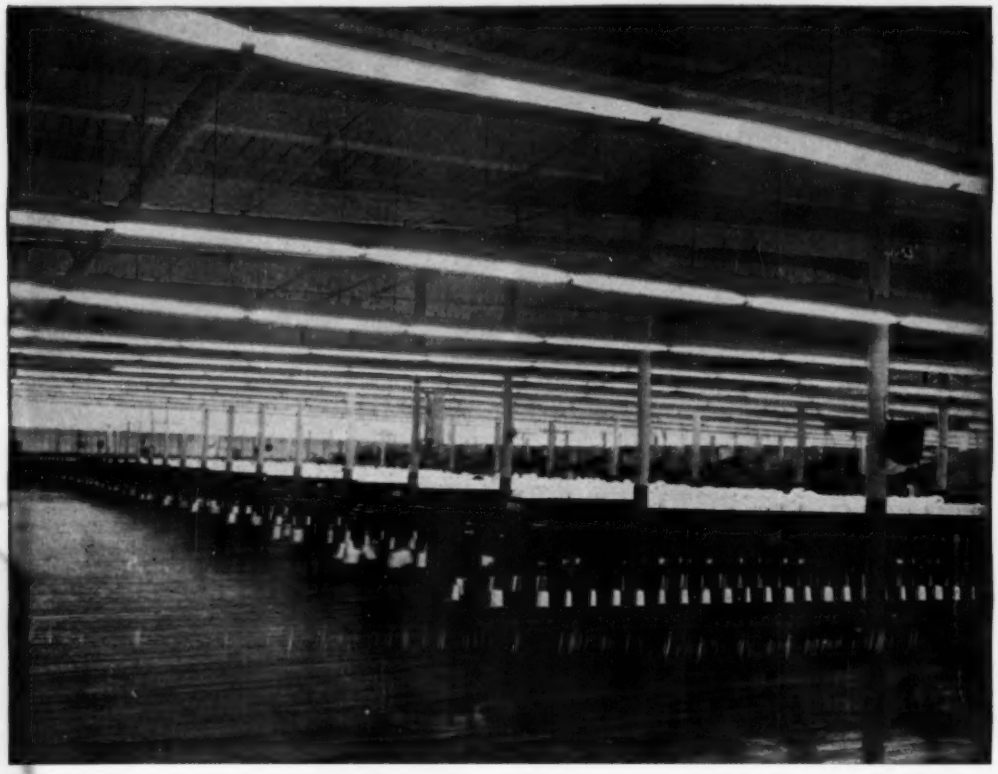
NAPPING QUALITY *is maintained by a rigid schedule of grinding the wire for sharpness and keeping napping rolls set properly.*



BOWED CLOTH—*the bane of tubular knitters—is prevented by good settings of edge drives on the calender and constant width control.*

ABBOTT MACHINE COMPANY

INSTALLATION OF AUTOMATIC RAYON QUILLERS



Twelve Abbott Automatic Rayon Quillers with Pinboard Attachments are run by only *six* operators in the above mill installation. Such an efficient installation achieves lowest operating cost with maximum production per operator.

Empty loom bobbins are automatically loaded and filled. Full loom bobbins are automatically doffed onto pinboards, which permits one operator to handle up to 240 spindles.

Abbott Quillers offer the lowest investment cost in the automatic winding field.

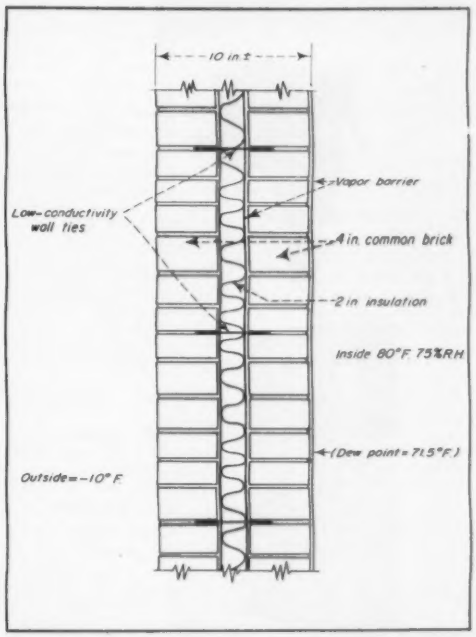
One of our representatives will be glad to study your filling winding requirements and submit a proposal for your consideration.

ABBOTT MACHINE CO., INC.

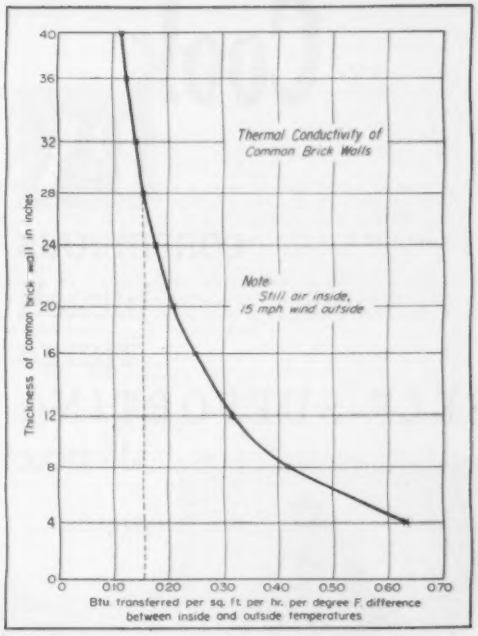
FACTORY AND MAIN OFFICE:
WILTON, NEW HAMPSHIRE

SOUTHERN OFFICE: GREENVILLE, SOUTH CAROLINA

For more information, write direct or use Reader Service post card.



RESISTANCE TO HEAT TRANSMISSION, *as shown in this side view of a typical mill wall, will vary, depending on the type of insulation used in the central core between the layers of bricks. Actual inside-wall surface temperature, when it is —10° F. outside, must be 71.5° F. for an inside-air condition of 80° and 75% r.h. Condensation starts on the wall below that minimum.*



THICKNESS OF WALLS *alone needed to do a particular insulation job is figured from this graph. The thicker the wall, the less heat transferred. Insulation tables provided by insulation manufacturers tell how much insulation is necessary to provide the resistance desired with the walls that a mill already has. Thus, with insulation, the wider-width walls are not necessary.*

AIR-CONDITIONING Principles Applicable in Any Mill

- *Condensation eliminated through adequate insulation materials*
- *Formula evolved for figuring thickness of wall insulation needed*
- *Bricking-in of windows gives best relief for conditioning troubles*

By GEORGE ECKMAN, *Engineer, Waumbec Mills*

HIGH TEMPERATURES and relative humidity in textile plants have created a problem in mill buildings that were built prior to the age of air-conditioning.

Particularly in Northern climates where outside temperatures frequently drop below the zero mark, mill operators have found that walls and windows were not designed to withstand the temperature differences without developing considerable amounts of condensation. Moreover, it has become apparent in older buildings that areas near walls and windows are difficult to maintain at a constant temperature and relative humidity, regardless of the type of system used.

The Problem

Since the windows are the weakest element and the most troublesome source of both cold spots and condensation, the simplest expedient is to hang up additional sash of the storm-window variety. This method helps solve the cold spots to a certain extent; however, there is still the nuisance of sweating windows and walls to contend with. Some conditions of condensation become so severe that mill buildings have had to be equipped with drain troughs under the window sills to prevent surplus moisture from running off onto the floor.

Another problem encountered with windows in air-conditioned mills occurs in the summertime when increased heat load caused by the rays of the sun create an overload on the conditioning equipment. This heat-load situation is solved in measure

Cook P&N

continuous bleach range

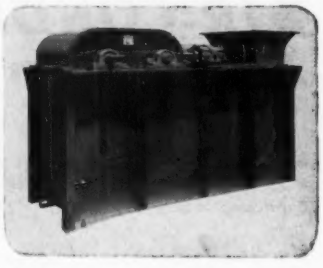
SELF-SUPPORTING J-box

Continuous Bleaching now plays a major role in the preparation of cotton piece goods. The Cook J Box has contributed in no small measure to this development.

Introduced only a short time ago, the Cook *self-supporting all stainless steel* J Box met with instant approval and is regarded by those who have it as outstanding in its field. Not only does it save floor space and provide greater accessibility but eliminates the usual structural steel supports which in the bleach house atmosphere of acid fumes do not stand up well.

Complete ranges are furnished with either the Becco or DuPont type J-boxes of any width and number of sections to fit your needs in either rope or open type processing.

All Cook machinery is fabricated in our own shops allowing design flexibility *without* premium cost. Stainless steel fabrication eliminates broken castings and factory-made repair parts. All machines are guaranteed to perform as specified. Your request for information will receive prompt attention.



COOK Saturator 3106-2 gives a uniform and thorough saturation. May be mounted inside J-box radius if available space is limited. Has self-supporting stainless steel tank. Squeeze rolls horizontally arranged, mounted in self-aligning anti-friction bearings and pneumatically pressured leave the correct amount of solution in goods for complete action in J-box. Rolls totally enclosed to prevent splash and accidents.

COOK-P & N MACHINE CO., INC., 365 Dorchester Ave., Boston 27, Mass.

by blinds, or by glazing with a blue tint especially designed to reduce radiant-heat transmission.

In the early stages of their development, light-diffusing glass blocks seemed destined to solve the problem of heat insulation and condensation. Great strides have been made by the glass companies in developing a building product that provides the necessary heat insulation and still maintains the desirable property of translucency. The fact remains that at the present time glass blocks fall short of offering the final solution to the problem, except for certain localities in the South where prevailing outside temperature conditions seldom exceed the limitations of glass blocks.

The Solution

If one accepts the fact that windows as such are no longer necessary in a mill, and even border on being undesirable, the problem of an insulated replacement panel becomes a relatively simple matter.

In the selection of materials and the method of construction, let us assume that the existing building consists of brick walls and fairly large window areas. Since most mills were built prior to the days of structural-steel frames, massive brick load-bearing walls and pilasters are quite normal in multi-story mill buildings. These thick walls will in many instances provide a sufficient amount of resistance to heat transfer, even though brick in itself can hardly be considered as an insulating medium.

In the event that existing brick walls are not thick enough to provide an adequate amount of insulation, it may become necessary to add insulation to the walls so as to prevent them from sweating. Generally speaking, additional insulation should be of a rigid variety, such as Foamglas, Fiberboard, or cork, applied directly to the room side of the wall and covered with a protective coating of a nature recommended by the insulation manufacturer. Insulation of walls, if necessary, should be done before or in conjunction with insulation of the window panels.

Many favor the core-wall design of insulation, where the insulation is sandwiched in between two masonry walls. Core-wall design has the advantage of being less expensive in most cases. It also provides a physical-protection surface to the insulating material on both sides and also blends in favorably with existing wall surfaces, both inside and out.

Prefabrication

There are available prefabricated window panels custom-built to any size window opening and adequately designed to provide the necessary degree of insulation. These panels are relatively inexpensive and can be installed with a minimum of dirt and confusion in a room that is being used during the installation. They are generally made of two sheets of thin-gage aluminum or stainless steel, separated by an insulation material and so constructed as to avoid thermal "short circuits" when bolted together. They are quite thin in cross-section and fairly light in weight.

Their main disadvantage consists of difficulty in anchoring the unit to the walls without bringing the metal surface in contact with the cold window reveals. In cases where existing walls are rather thick, the prefabricated panel must be located as near to the warm inside wall surface as possible. Otherwise a deep reveal will be left in the wall, which in most cases will be colder than dew-point temperatures and will result in condensation at the reveals.

Locating such a thin panel so as to be flush with the inside wall surface is not always possible without changing the appearance of the building facade. In short, these panels work best in cases where existing walls are thin in cross-section and adequately insulated so as to avoid surface temperatures of less than dew point.

Heat Resistance

From insulation tables provided by insulation manufacturers, it can readily be determined how much insulation is necessary to provide adequate heat resistance. Foamglas, for example, with a resistance of 2.50 per inch of thickness, has to be 2 in. thick to provide sufficient insulation as a core between two 4-in. brick-wall sections. This material cannot be purchased in less than 2-in. thicknesses.

Rockwool, with a resistance of 3.70 per inch of thickness could be poured into a core 1.1 in. thick instead of 2 in., and still provide adequate insulation. However, loose cores less than 2 in. thick are not practical from a construction viewpoint. Unfortunately, a dead-air-space core of 1 in. or more in thickness provides only a 0.91 heat resistance. Generally speaking, cavity wall construction is not capable of providing the proper amount of insulation for weave rooms in Northern climates.

Another aspect of the insulation-material selection problem is vapor migration through the wall and into the insulation itself. Most insulating materials, with the exception of Foamglas, are more or less susceptible to moisture, with resultant loss in insulating efficiency. A suitable vapor barrier somewhere between the warm-air side and the insulation is a "must" if satisfactory results are expected.

Asphalt-emulsion priming paints are good vapor barriers if applied properly; but when painting over asphalt, one should beware of a strong tendency for the asphalt to bleed through the finish paint unless suitable sealer coats are applied. Certain interior paints are vapor barriers themselves; however, it is wise to investigate paint-manufacturers' claims before placing

(Continued on page 204)

How Much Insulation?

Having once established the maintained inside temperature, humidity, and the outdoor minimum expected temperature, one can determine from the following formula the amount of insulation needed to prevent condensation:

$$U = \frac{t_i - t_d}{0.61\,(t_i - t_o)}$$

U equals the amount of heat transferred through a composite wall section expressed in Btu's per sq. ft. per hr. per °F. difference between inside and outside temperatures, t_i equals indoor dry-bulb temperature, t_o equals outdoor dry-bulb temperature, and t_d equals dew-point temperature in the room as computed from dry- and wet-bulb readings and a psychrometric chart.

As an example of the formula, let us assume a weave room wants to maintain a relative humidity of 75% and temperature of 80° F. The minimum outdoor temperature for design purposes is assumed to be —10° F. From a psychrometric chart it is calculated that, at 80° F. and 75% r.h., the dew-point temperature is 71.5° F. Therefore:

$$U = \frac{80 - 71.5}{0.61\,[80 - (-10)]}$$

$$\frac{8.5}{0.61 \times 90} \quad \text{or } 0.155$$

It is therefore necessary to build enough insulation into the wall section to provide a Btu. heat transferral of not more than 0.155. To do the job, a brick wall alone should be at least 28 in. thick (see graph on page 139).

Every Minute Meant a $1920 saving

Big return for a minute's time . . . but to a leading Philadelphia manufacturer* a 5 minute interview did result in a total saving of $9600.

This manufacturer faced a problem that's common to many plants today. His ten machines have 560 bearings—560 bearings that must be kept lubricated if production is to be kept uniform, rejects few. That lubrication job was taking four man hours every week and, because of human fallibility, there was always the potential danger that one of these many bearings had been overlooked or under lubricated.

An Alemite Lubrication Engineer was called in. He made his presentation in just 5 minutes—5 minutes that saved $9600. He told the manufacturer the facts of installing a modern Alemite Centralized Lubrication System. That system is in the plant today. The result: assurance of continuous, correct lubrication, few rejects and shut downs, and the addition of a whole hour's production time every working day.

Call Your Alemite Lubrication Engineer

No matter what size or type of plant you operate, Alemite can show you dozens of ways to save through the more efficient handling of petroleum products. Call your local Alemite Industrial Distributor now or send for the free booklet "11 Ways to Cut Production Costs." Simply attach the coupon below to your letterhead. Dept. J-81, 1850 Diversey Parkway, Chicago 14, Illinois.

*Name on request.

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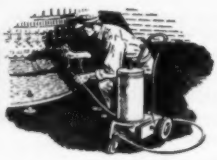
1. Methods 2. Lubricants 3. Equipment

Another Product of Stewart-Warner

Alemite Cuts Costs 3 Ways

1. In transferring lubricants... cuts man hours 63% for every 100 pounds transferred. No mess, no contamination.

2. In loading grease guns . . . saves 3¾ man hours for every 100 pounds of lubricant loaded into hand guns.



3. In applying lubricants . . . saves up to 23.9 man hours for every 100 pounds of lubricant applied to bearings.

FREE! Valuable booklet—
"11 Ways to Cut Production Cost"
(Simply attach to your letterhead)
ALEMITE, Dept. J-81
1850 Diversey Parkway, Chicago 14, Ill.

We'll include facts on the new Alemite Oil-Mist System, too—(OIL-MIST atomizes oil into mist, circulates it to bearings under pressure. Increases life of bearings as much as 17½ times).

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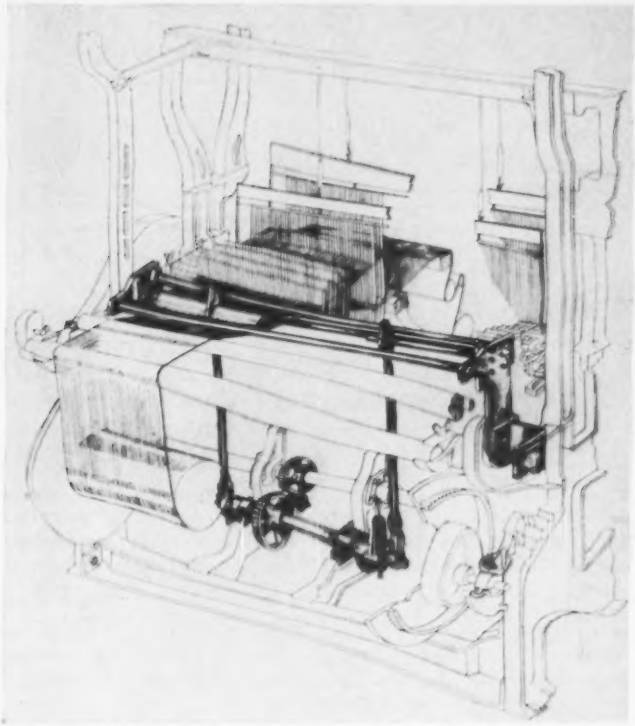
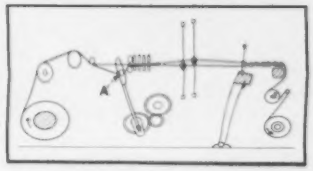
For more information, write direct or use Reader Service post card.

TEXTILE Equipment NEWS

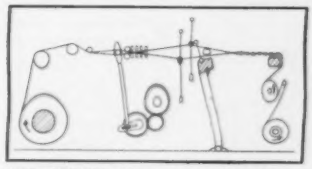
New Loom Attachment Weaves Extra-Tight, Waterproof Cotton Fabrics



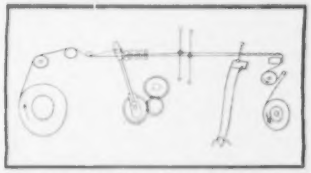
SRRL TENSIONING ATTACHMENT, *shown on a 42" Draper Model-XP loom, is also applicable to other standard looms. It is made up largely of standard parts.*



FIRST PICK. Push bar (A) holds lower half *of warp yarns tight as first pick is beat up.*



SHED OPENED. *There is equal tension on the entire warp as picking takes place.*



SECOND PICK. *Upper half of warp yarns is now tightened by the push bar as the second pick is beat up.*

An improved, inexpensive loom attachment for weaving extra-tight, naturally waterproof cotton fabrics has been developed at the Southern Regional Research Laboratoy, 2100 Robert E. Lee Blvd., New Orleans 19, La. This device, a new model of the loom attachment developed previously by the laboratory, can also be used in weaving conventional fabrics—especially hard-to-weave fabrics such as high-thread-count print cloths.

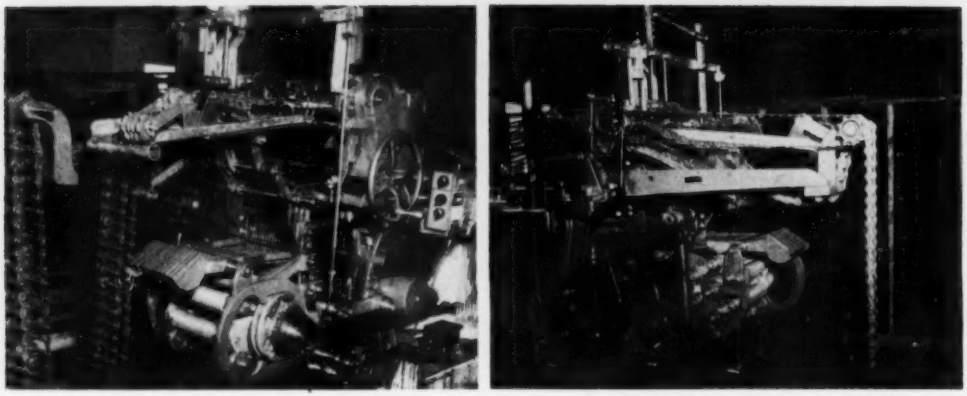
The new attachment is based on the principle of producing more "cover" on a fabric by having less tension on one shed layer than on the other as the lay beats up. This condition allows the loom to insert more picks per inch than could be achieved otherwise. By means of a push bar actuated from an auxiliary shaft driven from the loom cam shaft, the attachment applies tension first to one shed and then to the other during successive beatups of the filling. When released, this tension introduces considerable slackness in the shed layer and allows the filling thread to be beat up either over or under the previous pick. On the next pick, the slack shed becomes the tight shed and pulls the previous over- or under-riding pick into the plane of the fabric.

Constructed mostly of standard loom parts, the device can be built at a very reasonable price. It is said to be easily installed on standard looms.

Identical lots of broadcloth, print cloth, and light duck of normal density were made with and without the attachment for comparison in the gray goods before dyeing and finishing. Those fabrics woven with the device had the better appearance, were more uniform, showed practically no reed marks, and were 3 to 10% stronger. In weaving these fabrics, the laboratory found that the attachment improved the general operation of the loom by easing the strain on the warp yarns.

The attachment also makes possible the insertion of up to approximately one-third more picks than can be obtained without it. Fabrics so woven are of such dense construction that they resist the penetration of water and require no chemical or other treatment to make them waterproof. Service tests conducted by the laboratory bear out the above statement.

Engineering drawings of this new loom attachment, together with samples of the experimental fabrics produced, are available to interested cotton mills and other organizations.



FRONT AND REAR views of dobby attachment that is said to reduce changeover time in electric-blanket production by eliminating use of jacquard head.

Multiple-Cylinder Dobby Attachment Produces Jacquard Effects

A new multiple-cylinder dobby attachment has recently been patented by its inventor, Ivar O. Moberg, Spray, N. C.

The attachment can be applied to any dobby or Knowles head motion without interfering with the conventional running of these harness motions. The attachment does not need to be removed to make possible conventional running of the dobby or head motion.

The multiple-cylinder attachment was primarily developed for production of electric blankets and electric sheets without the use of the expensive jacquard head now being exclusively used for this production. The attachment is equally useful for fancy-border blankets, table cloths, cross-border towels, bedspreads, fancy curtains, draperies, etc., where several basic weaves, or combinations of basic weaves, occur at great intervals.

The attachment consists of a revolving magazine that holds six or eight aluminum pattern cylinders. These cylinders are driven by a planetary gear motion, revolve around their own axis, and move around intermittently in their orbit when called to do so by the box chain of the loom so equipped.

Each pattern cylinder can carry its own complete weave, or all the cylinders may be combined to produce a fancy weave within their limit. Thus, for instance, each cylinder will have a maximum filling repeat of eight picks, if single index, or sixteen picks, if double index. A six-cylinder attachment will have a maximum filling repeat at 48 picks if combined and single indexed. If double indexed, the maximum filling repeat will be 96 picks.

The cylinder magazine can be called to move either forward or backward to bring either the preceding or succeeding cylinder into operating position. Since the whole cylinder revolves in unison, the danger of mispicks at the change of weaves is eliminated. The harnesses are operated and controlled by direct-peg indication from the cylinders. No pattern chain is used.

Continuous Washers Now Have Tensionless Speed Compensator

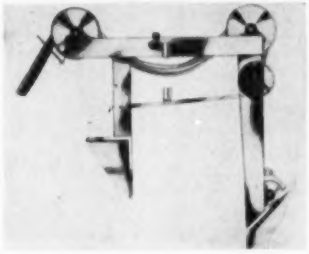
A tensionless device that automatically synchronizes the speed of each tub in a continuous-washer range has been announced by Riggs & Lombard, Suffolk St., Lowell, Mass. Called the "Free-Loop Electrimatic Compensator," the device is also said to facilitate threading.

Cloth is allowed to hang in a free, tensionless loop between two small stainless steel reels, one of which is an idler.

Whenever change of speed is needed, the cloth loop "signals" the motor of the following tub to change its rate of drive. The signal is automatically received and put into effect by the new compensator, which is is available as either contact-type or trip-type unit.

Both are equipped with safety knock-off bars.

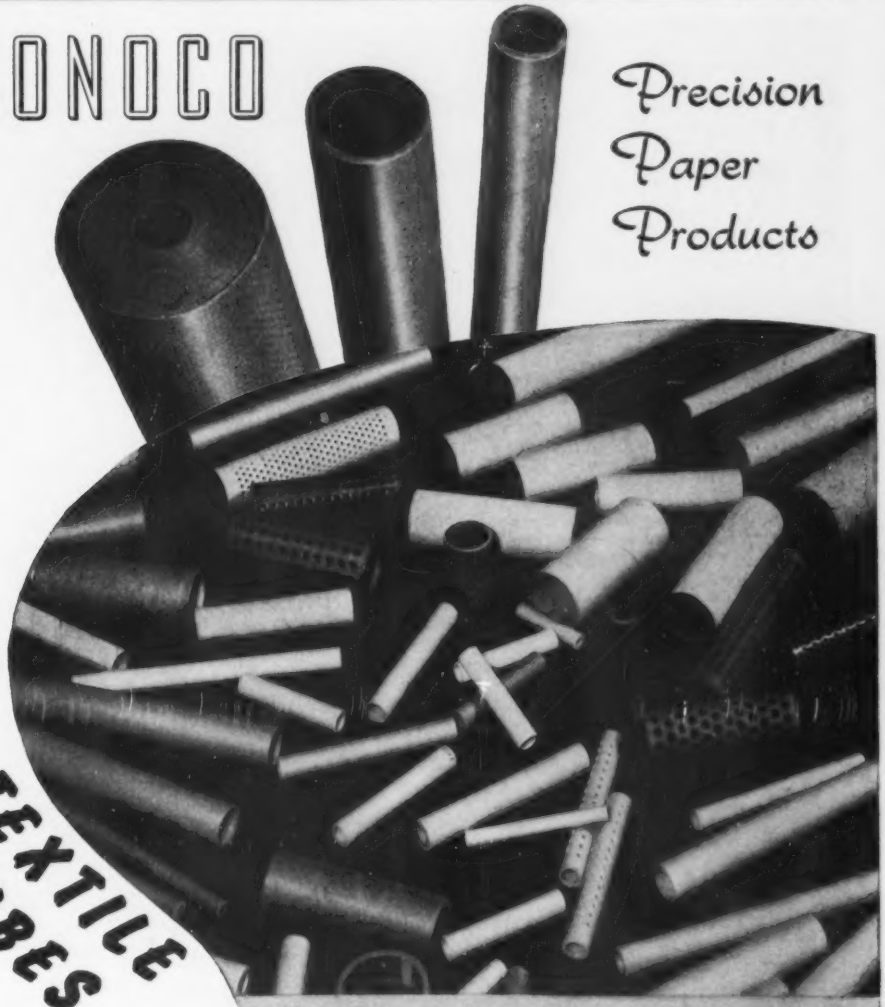
WITH THIS CONTACT-TYPE UNIT, the free-hanging loop of cloth closes an electrical circuit when it makes a contact between two metal plates. Closing the circuit causes the main drive unit on the next tub to speed up slightly as required. No control is needed to slow next tub down as this motor normally runs slightly slower than the main-drive unit.



THE TRIP-TYPE UNIT features two electric-eye units, between which the loop of cloth runs in a synchronizing position. Should an increase or decrease in speed be required, the loop moves up or down to intercept the proper beam. This action cause the motor on the next tub to speed up or slow down. Trip bars can be used instead of the electric-eye units.

SONOCO

Precision Paper Products



TEXTILE TUBES

Sonoco tubes are available in sizes from ¼" to 24" inside diameter, in lengths up to 24 feet with any practical wall thickness . . . they can be supplied in a choice of colors . . . they can be embossed, scored, velvet or Unitex surfaced . . . they can be treated, impregnated, perforated, and printed to specifications . . . they can be end notched, end burnished and end-tipped with colored lacquer bands.

Sonoco technical experts are available to work with you on any textile carrier problem.

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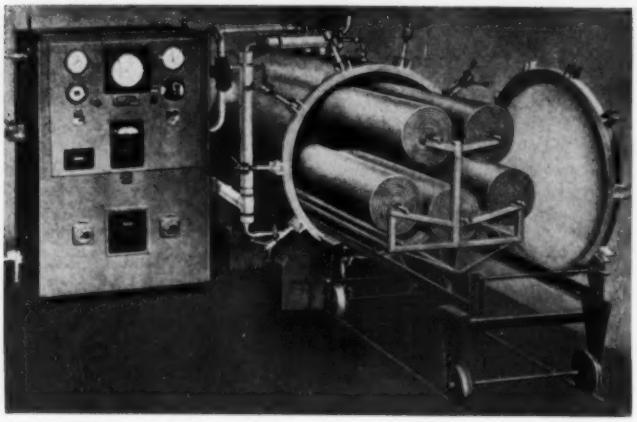
DEPENDABLE SOURCE OF SUPPLY

Nylon-Setting Machine Treats Rolls of Woven or Knitted Fabric



NYLON-SETTING MACHINE treats fabric in roll form and uses vacuum with pressure steam to do the job.

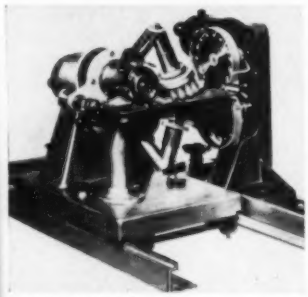
A steam setting machine, specifically designed for treating woven and knitted nylon fabrics has been introduced by Sanderson and Co. Ltd., 16 Cumberland St., Manchester, England. The machine is claimed to give important economies in production because cloth in process can be treated in roll form.

The essential feature of the machine is that the rolls of fabric are contained within a closed compartment, where they are subjected to steaming under controlled conditions of temperature and pressure.

Principal component of the machine is a jacketed cylindrical compartment, provided at the front with a circular door fitted with quick-acting clamps. Rolls of fabric, mounted on a special frame, are moved in and out of the machine from an undercarriage running on rails at floor level. The control unit, which is mounted beside the machine, has an air-cooled, self-lubricating vacuum pump, coupled to a 6-h.p. motor. The unit also carries a variety of instruments—a temperature recorder, a steam pressure gauge, a thermostatic control for the heater coil or jacket a self-resetting process timer, various switches, push-button starter, and a warning light signal.

After the fabric has been loaded into the vessel and the door closed, the process timer, the steam pressure switch, and the heater are set, and the vacuum pump is started. The machine then works automatically and, when pressure is reduced to 26 in. vacuum, the pump stops. A valve then closes the vacuum-pump suction pipe, and the steam-injection valve opens. When the steam pressure reaches 15 lb. per sq. in., the steam valve closes. When the process timer reaches zero, the steam let-off valve opens, the process timer resets itself for the next operation, and, when the warning light indicates that atmospheric pressure has been reached inside the vessel, the door can be opened. The fabric is then removed and the cycle repeated.

Selvage Trimmer Follows Edge Closely Without Damage



GARA SELVAGE-TRIMMER can be used with existing machines or attached to a special rerolling machine.

A trimming machine that cuts filling threads from the selvage of cloth being unrolled has been developed by Muschamp Taylor Ltd., Vulcan Works, Pollard St., Manchester, England.

In operation, the cloth passes between guide plates on the trimmer head. Two rapidly rotating brushes, placed above and below the cloth, insure that every trailing end of filling is taken beyond the edge of the cloth and laid in position—at an angle of 90° to the cloth—to be cut by the rotating circular knives. The loose ends are then removed by suction to a conveniently placed receptacle under the machine.

The trimming head is a self-contained unit incorporating a fractional-h.p. electric motor, normally for 220-v. supply. Motors for other voltages can be fitted. Replacement or removal of the cutting knives for sharpening and other maintenance is simple.

Special features of the design make it impossible for the machine to cut into the cloth, and it can also follow an uneven selvage so that a clean edge is produced no matter how irregular the cloth may be. The two rotating brushes, in addition to insuring that the trailing filling end is presented correctly to the knives also play a big part in keeping the machine in line with the selvage.

Gasoline Trucks Improved for Use in Hazardous Areas

Availability of spark-enclosed models of gasoline fork trucks has been announced by Yale & Towne Mfg. Co., 11,000 Roosevelt Blvd., Philadelphia 15, Pa. Designated as U. L. Type 6S, the new trucks are designed to provide a high degree of safety even when they are used in gas- and dust-laden areas.

Maximum protection in the trucks has been accomplished by shielding the electrical equipment against sparking, by providing a water-type exhaust manifold, by providing a water-cooled muffler, and by using static-conductive tires.

Trucks that are so equipped are less ready a source of ignition of vapor sparks, hot metal surfaces, exhaust gases, or backfires, thus eliminating many fire hazards.

True Alignment

Look at a Textile Spring-Beard Needle. See the perfect straightness of stem, side, back and beard. And Textile Needles remain straight and true.

Straightness is one of the many advantages you receive through Textile's quality controls — automatic and electronic — which constantly check each stage of production. You get better performance in more even stitches and lower production costs.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

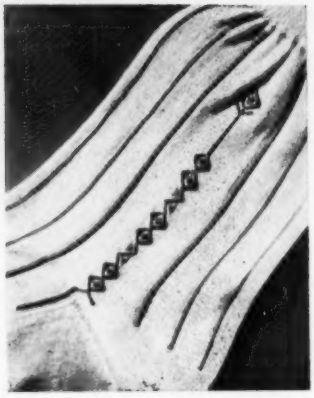
For Full Fashioned Knitting

For Warp Knitting

Superior Plaiting Accomplished With Improved, Adjustable Wrap Horn

ADJUSTABLE WRAP HORN (left) for their 3½-in. HH-PW, color-in-color, true wrap machine has been announced by Scott & Williams, 350 Fifth Ave., New York, N. Y.

WITH CONVENTIONAL WRAP HORN stockings show ribs that are not perfectly continuous or do not stand out sharply, as shown above.



WITH IMPROVED HORN, ribs are accented. One end of 300-den. acetate wrap yarn is said to be just as good as two ends of 350-den. yarn, when the new horn is used.

Industrial Cleaner Operates on Compressed Air

A new industrial cleaner that creates suction by the jet principle has been announced by Patterson Products, 518 Maccabees Bldg., Detroit 2, Mich. A patented air valve vibrates 2,000 times per min. and minimizes air consumption.

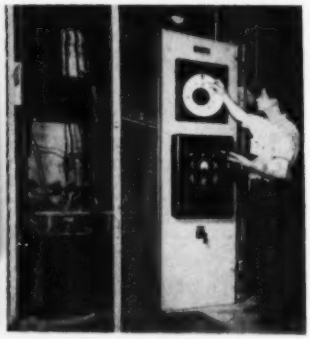
An external stream of air can dislodge dirt from inaccesible places to where it can be picked up by the suction. Fingertip controls make the switch from blowing to suction easy for the operator.

The cleaner comes with standard nozzle widths of 5, 8, or 10 in. Wand lengths are 14 in. to 6 ft. Three orifices are furnished with each machine and give air consumptions of 2.7, 5.5, and 7.7 cu. ft. per min.

Total weight of the Pick-A-Back unit complete is 7½ lb. Several sizes of castered tank models from 20 to 55 gal. can be had for wet or dry cleaning operations.

THIS AIR-OPERATED CLEANER features agitating suction that is said to dislodge and collect more dirt than steady suction.

Nylon Fabric Continuously Set by Radiant Heat



OPERATOR SETS CONTROLLER to setting temperature of the fabric in this new nylon-setting machine.

A nylon-setting machine that permanently sets nylon-tricot fabric at a continuous rate of 16 yd. per min has been developed by the McCreary Machine Works, Inc., Cohoes, N. Y., with the assistance of the General Electric Company's Industrial Heating Div.

Designed to be installed on existing tenter frames the new machine consists of aluminum reflector units that house Calrod tubular heaters. Automatic temperature control is provided by an electronic temperature-control unit that allows automatic stepless heat adjustment through thermocouples located in the reflector frames. Although 16 yd. per min. is the average machine speed, higher speeds can be accomplished with additional reflector units.

Operating costs are said to be less than $1.00 per hr. Compared with autoclave and other methods, radiant-heat setting requires only five instead of ten steps, and the width of the set fabric is constant. Dyeing can be done either before or after setting, and the method is continuous. Since the material is set while still on the tenter frame, extreme accuracy in dimension is obtained.

In operation, the operator sets the temperature-indicating controller to the predetermined setting temperature of the fabric and then pushes the button to start the tenter drive. The machine is electrically co-ordinated with the tenter drive to make the operation automatic. To prevent scorching, the reflector frames are designed to raise automatically if flow of fabric through the tenter frame should stop.

The machine is designed with sufficient temperature range to treat other synthetic fabrics, such as Fiber V and Orlon.

How is *Quality* Measured?

Because of today's uncertain world conditions, your textile equipment may again have to be put to work on emergency schedules. The measure of its quality may be its ability to operate for long, continuous periods at peak production.

We invite your comparison of the Van Vlaanderen INSPECTALL with competing makes. The INSPECTALL has been purposely engineered to outlast and out-perform them all. Compare its features, point by point, as shown in the column at the left.

COMPARE

these features with those of any other make

- Built to a precision and sturdiness not before available.
- Exclusive design, one-station group control for easier, faster operation.
- Wide-range, variable speed control at operator's finger tips.
- Instantly reversible, one motion clutch control, hand operated from any examining position.
- Let-off tension arrangement controlled from front of machine.
- Any fabric can be examined face or back because take-ups operate clockwise or counter-clockwise.
- Center bar quills are ball-bearing mounted with opposite end equipped with new, Van Vlaanderen positive center-bar lock.

This new, superior examining machine will handle rolls up to 36" in diameter. Examining board is 36" high in widths for 60" and 70" cloth. Special widths available. Machine is equipped with precision clock, measuring yards and eighths from shell to shell. Attachment (optional) available for running tube to tube or shell to tube.

The INSPECTALL is equipped with ball bearings throughout . . . sealed in for life. Drive is completely enclosed. Oversize dry disc clutches. Hard chromium-plated guide rolls.

You are invited to see this quality machine. We also make a tubing and measuring machine, a combination tubing and doubling machine and a roll make-up beaming machine.

VAN VLAANDEREN INSPECTALL

VAN VLAANDEREN

You are invited to see this machine.

MACHINE COMPANY

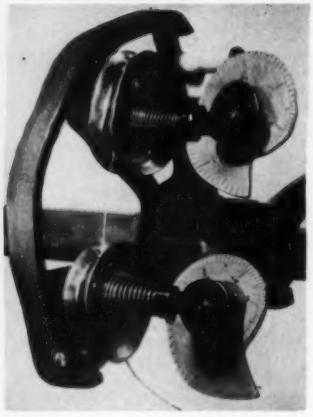
370 Straight Street, Paterson 3, New Jersey

Cable address: VLAANDEREN, Patersonnj, U. S. A.

World's largest manufacturer of machines for processing modern fabrics

Swiss Bobbin Winder Improved

SEVERAL DESIGN CHANGES for the Giromat automatic bobbin winder have been announced by Bruegger & Co. Ltd., Horgen-Zurich, Switzerland. Diameter control (as shown above) for the new winder is set by moving a pointer on the traverse-bar scale. This control is said to give positive and variable control of diameter within limits of shuttle capacity. Winder now can take bobbins up to 10 in. long.



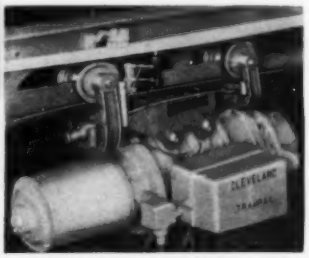
TENSION is now controlled by setting a pointer against a scale on the tension device. The main tension disk rotates as the yarn presses through and is therefore self cleaning. Other improvements include: redesigned traverse gearing, new tension compensator, steel shaper wheel instead of plastic, metal cover for traverse-bar and shaper mechanism, and a hardened-glass door to allow the operator to see when more empty bobbins are needed.

Packaged Steam Power Plant Is Now Available

The Ticosteam Generator—a packaged steam power plant—has been announced by Titusville Iron Works Co., Titusville, Pa. The unit is fully automatic in operation and is mounted on a steel skid for installation on level and solid floors without foundation construction. The generator is ready for operation as soon as service connections are made. A roof vent—not a stack—is sufficient.

Available in a full range of sizes and several fuel combinations—light oil, light oil and gas, heavy oil, heavy oil and gas, and straight gas—the steam generator has an automatic fuel-mixing device for maximum flame efficiency and smokeless operation. Combustion efficiency is said to be over 80%, and thermal efficiency is 80% for oil and 75% for gas with the new generator."

Overhead Electrification System Stresses Safety



SLIDING CURRENT-COLLECTOR SHOES contact three sides of the plastic-enclosed conductor bar in this new overhead tramrail power system.

A new type of electrification for overhead cranes and tramrail systems has been announced by The Cleveland Crane & Engineering Co., Wickliffe, Ohio. The improvement—Saf-Powr-Bar—consists of inverted, U-shaped conductor bars with sliding current-collector shoes. The arrangement may be used on either new or old tramrail systems.

Plastic enclosing of Saf-Powr-Bar prevents accidental contact with an electrified conductor bar. The sliding-shoe arrangement is said to increase shoe life to 2,000 mi. where 400 mi. used to be maximum for an open bar with collector wheels.

Saco-Lowell Developing New-Type Cotton Opener

A new type of cotton opener, designed to beat out heavy impurities and to float out light impurities, is under development by Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass. Called the Trash Ejector, the machine uses four special beaters, one above the other. An adjustable cutoff is placed between each beater, and between the inlet and outlet.

Grids and Dust Bins

The beaters have grids 45° above and 45° below the center. A perpendicular, flat grid takes up the space between the 45° grids.

Dust bins are located on each side of the grids. Angle plates set close to grids break up air currents and cause the dirt thrown out by the grids to fall away.

An apron carries motes and dirt out of the machine at a constant rate.

Cylinders

Beaters consist of six flat, radial blades. The blade face measures 1¼ in. in the direction of rotation. The blade is 3 in. deep on the retreating side. Sheets of steel fill in between the blades to make the cylinder totally enclosed.

A special negative pressure arrangement is said to float light particles out through the grids. Heavy impurities are thrown through the grids as in the conventional system.

Feeding

The trash ejector is to be fed through a #11 condenser that throws cotton into the inlet at the top of the machine.

Laps

Laps made on this new machine are said to show a decided change in color because more dust is removed. Less seed coatings, fewer light particles, and less motes are also claimed as advantages.

With the narrow, flat blades used in the trash ejector, there is said to be no tendency toward fiber curling, even after six passes through the machine on a trial run.

All-Metal Expansion Joints Require No Packing

A line of expansion joints that need no packing has been announced by The Phillips Rotary Joint and Valve Co., Inc., 5711 Boulevard East, West New York, N. J. The joints can be used for steam, water, oil, chemicals, and gas.

The expansion joints are available in both flexible and conventional series.

OPERATION: FLEXIBILITY

A CLEAVER-BROOKS STEAM BOILER GIVES YOU:

✓ **Quick, effortless response to fluctuating steam demands.**

✓ **Equally high efficiency (80%) operating with oil or gas.**

Fluctuating steam loads are no problem when you have a custom-planned Cleaver-Brooks boiler in your plant. Whether your demand is heavy or light, steady or variable, these sturdy heavy-duty boilers respond instantly to your steam needs. Even with loads as low as 30% of rating, Cleaver-Brooks boilers operate with a flat 80% efficiency.

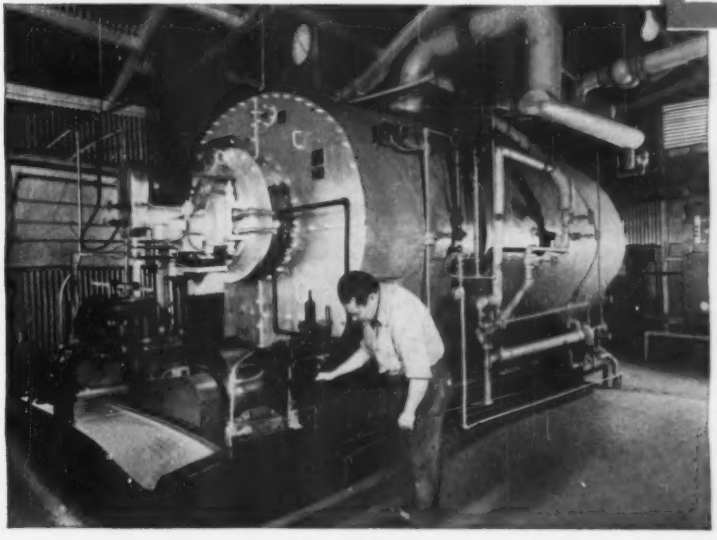
Cleaver-Brooks boilers burn either oil or gas . . . either fuel is properly proportioned to meet your steam demand and need. No banking of fires or loss of valuable heat during low load periods. You benefit with lower fuel bills, less maintenance, reduced operating costs.

If you are considering a change in your present boiler plant—think about flexibility — and get the complete facts about Cleaver-Brooks custom-planned boilers. Cleaver-Brooks self-contained boilers 15 to 500 HP, 15 to 250 lbs., p. s. i. — oil, gas, combination oil and gas firing. CLEAVER-BROOKS COMPANY, 370 East Keefe Avenue, Milwaukee 12, Wisconsin.

Cleaver-Brooks

STEAM BOILERS

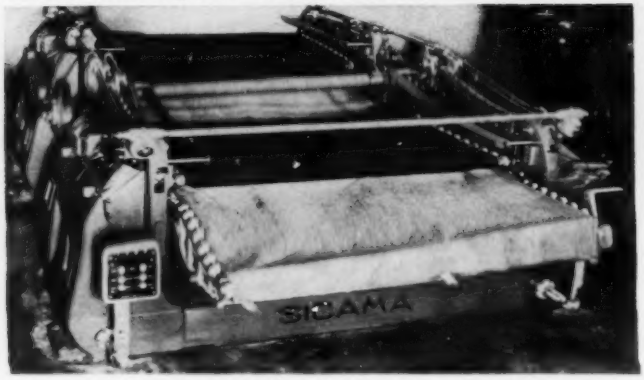
the first and finest of their class



Write for a Cleaver-Brooks Steam Boiler Catalog.

For more information, write direct or use Reader Service post card.

Italian Shrinking Machine Installed



A NEW MULTIROLL SHRINKING MACHINE that is said to be the basis of a new theory and process for felt-making has been announced by The Felters Co., Boston, Mass. The company installed the machine at a cost of about $70,000.

Molded Packings Are Precision Made

DESIGNS of this new packing include cup, flange, U-ring, and O-ring.

A line of molded packings for hydraulic and pneumatic equipment has been announced by Periflex, Inc., Hazel Park, Mich.

Compression-molded from a fabric-and-neoprene compound, the packings are said to have good wearing qualities and resistance to many hydraulic fluids.

Clamp for Fork Trucks Is Self-Centering

YOU CAN PICK UP a cotton bale off-center and then rotate it safely with this new self-centering, rotating clamp.

A hydraulically operated clamp for industrial fork trucks—a clamp that enables bales, bins, and drums to be picked up and transported on the centerline of the truck—has been developed by Yale & Towne Mfg. Co., 11,000 Roosevelt Blvd., Philadelphia 15, Pa.

The new clamp, which has synchronized movement of arms in opening and closing, is said to eliminate unstable conditions and to make easy the carrying of loads not perfectly lined up before loading.

A variable clamping pressure permits handling of many types of load. The self-centering arms have an inside opening range of 17 to 66 in. The clamp will handle loads up to 6,000 lb. and, according to the manufacturer, can be installed on gasoline or electric trucks.

New Strap Cutter Fits Palm Easily

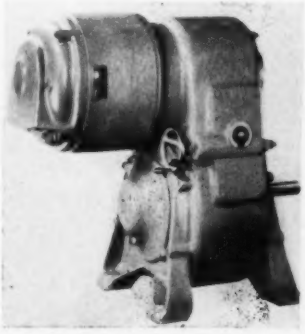
THIS STRAP CUTTER, designed to cut flat steel strapping up to ¾ in.x.035 in., has been developed by Acme Steel Co., 2840 Archer Ave., Chicago, Ill. The lower blade of the tool is flat for easy insertion. It is also equipped with a band guide, which prevents straps from wedging sidewise between the blades.

Larger-Horsepower Variable-Speed Drives Available

New, larger-housepower Speed-Trol electric power drive have been added by Sterling Elect.. Motors Inc., 5401 Anaheim-Telegraph Rd., Los Angeles 22, Calif. The drives are designed to meet the growing demand for variable speed drives of 20- and 25-hp. ratings.

Outstanding features of the drives are said to be positive adjustment of pulleys, infinite speed variation, and accurate control of speed under varying loads.

Drives of these new ratings will be available in splash-proof, drip-proof, and totally enclosed, fan-cooled models—all with built-in reduction gears for the lower speed ranges. All models can be supplied with manual control, or electric or mechanical remote control. Motor housing and variable-speed transmission case are made of rugged gray iron castings that provide utmost protection from moisture-laden or chemical atmospheres.



DRIP-PROOF MODEL Speed-Trol shown is just one in the new line of larger drives recently announced.

Strong fibres start here

When these logs are pulled up the chute toward the chipper they are taking the first step toward becoming a Gaylord Shipping Container.

Throughout the entire complicated procedure of converting wood into paper — sharp-eyed technicians are constantly checking quality, making adjustments, testing to be absolutely sure that the end product is as strong and tough as it is possible to make it.

This quality control by experts is one reason why Gaylord lists many of the world's largest users of shipping containers among their satisfied customers.

GAYLORD CONTAINER CORPORATION

General Offices: **SAINT LOUIS**

CORRUGATED AND SOLID FIBRE BOXES
FOLDING CARTONS
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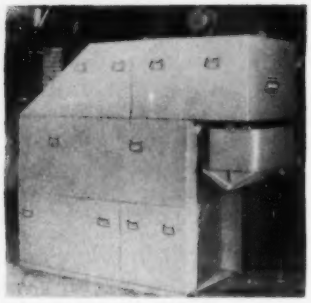
Waste Feeder Is Smaller Fiber Meter



THIS 24-IN. WASTE FEEDER, a smaller counterpart of the 36-in. Fiber Meter, has been announced by W. D. Dodenhoff Co., Inc., Greenville, S. C. The new unit, designed for present Fiber Meter systems or for new installations, automatically weighs out waste in increments of as little as 2 oz., with a variation of ⅛ oz. Any staple fiber can be fed. Over-all dimensions of the machine are about 4x2½x5 ft.

New Tachometer Monitors Speeds of Many Machines

Speeds of many machines can now be measured from one convenient location with a new tachometer announced by Metron Instrument Co., 432 Lincoln St., Denver 9, Colo. Elimination of duplicate speed indicators is said to reduce initial costs and operating expenses.

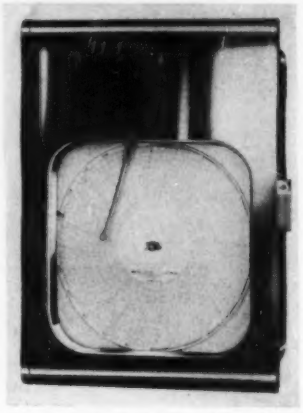
Over fifty standard, full-scale range markings are available. Various heads can indicate speeds from 0.1 to 100,000 rpm. Any desired units—rpm., ft. per min., yd. per hr.—can be indicated. No speed-changing drives are necessary. Connections between the heads on the machine and the indicator are made with ordinary electric wiring.

The meter, mounted in sponge rubber, is not damaged by overspeeding. No limited-life components are used.

Calibration, initially made at the factory, is easily adjusted in the field to accommodate extraordinary conditions.

THIS TACHOMETER can be located up to 1,000 ft. from any of the several machines whose speed it can register.

New Running-Time Recorder Developed



A NEW LINE OF RUNNING-TIME RECORDERS has been announced by The Bristol Company, Waterbury 20, Conn. The recorders record on a chart the operating or "on" time of production machinery and other similar equipment. The chart record gives the total "on" time in hours, minutes, and seconds for a given period. "Time off" periods are also shown on the chart as well as the time at which they occurred. The recorder magnifies the running-time readings in such a way that the total operating time of a machine can be easily and accurately determined to within a few seconds. The units are furnished in models suitable for wall, flush-panel, or portable use.

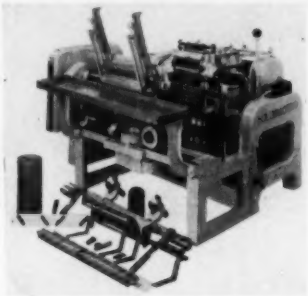
Swiss Harness Frame Now Made in U.S.

The Lightmetal harness frame—one feature of which is free-riding slide hooks that do not allow heddles to bunch—developed and first produced in Switzerland, is now being made in the U. S. by Grob Corp., New Bedford, Mass.

Side supports of the frame are made from "Lignostone," a highly compressed, impregnated wood that cannot warp and is moistureproof. Since the wooden supports are thicker than the frame, there is no metal-to-metal contact during the time the loom is in operation.

A special snap-in center support is provided for extra-long frames. A special assembly also converts a regular frame into a selvage frame, or converts a selvage frame into a regular harness frame for immediate use on the loom.

Gill Reducer Has New Balling Head



A NEW BALLING HEAD for the standard Holdsworth gill reducer has been introduced by Atkinson, Haserick & Co., Box 2125, Boston 6, Mass. Available in either single- or double-head models, the balling head needs only the few parts shown in the picture to change from single to double delivery.

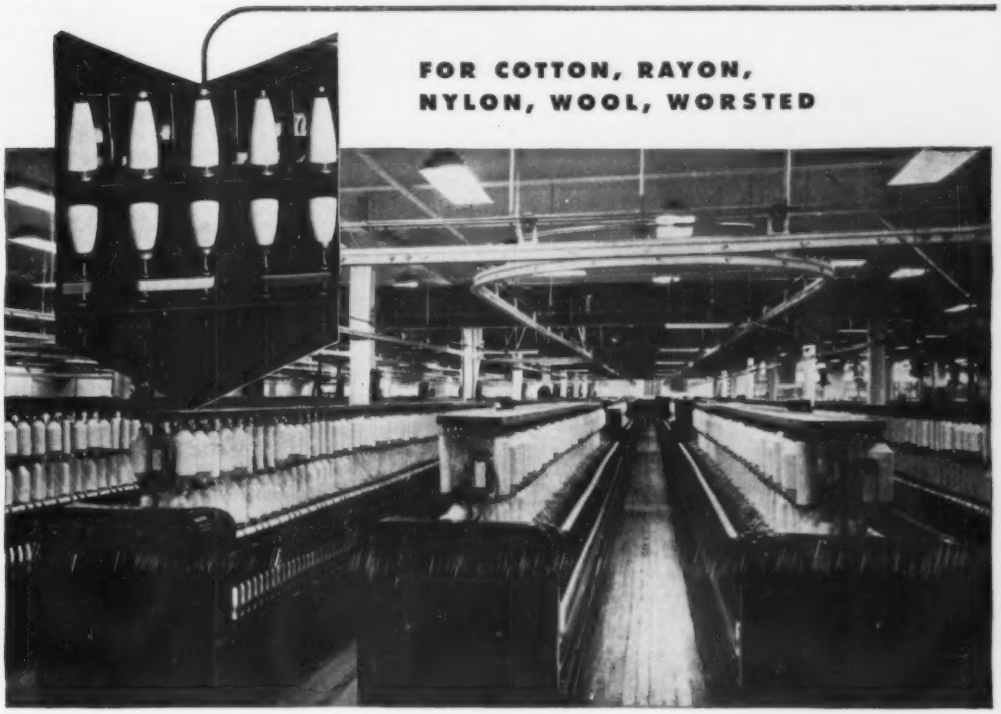
Metal Containers Available For New Washfastness Test

New specimen containers for the AATCC No. 3A tentative accelerated washfastness test have been announced by Atlas Electric Devices Co., 361 W. Superior St., Chicago 10 Ill. The unbreakable containers are to be mounted horizontally at right angles to the shaft and are designed for use in any standard- or research-model Launder-Ometer.

Use of the containers according to specifications is said to duplicate the color destruction and abrasive action of five average launderings in just one 45-min. test—one tenth of the time required by old test methods.

Marquette *Roller Bearing Spindles with Full-Floating Footstep Bearing....*

FOR COTTON, RAYON, NYLON, WOOL, WORSTED



● Several years ago this mill ran a test on a frame of 312 Marquette Roller Bearing Spindles, and today has more than 124,000 in operation . . . some on new frames, some as replacements.

Marquette Cotton Spinning Spindles operate at high uniform speeds and produce yarn of top quality. They reduce costs through savings in power, tape, lubricant and maintenance.

We'll be glad to prove this with a test installation in *your* mill. Contact our home office or one of our representatives.

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The Marquette METAL PRODUCTS CO.
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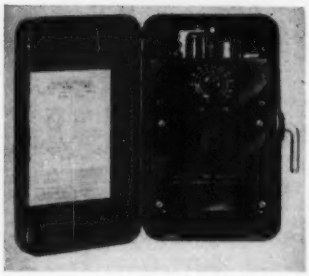
TEXTILE *Equipment* NEWS

Short-Interval Timer For Automatic Control

A SHORT-INTERVAL ELECTRONIC TIMER that meets specifications of NEMA class-1A non-synchronous timers has been developed by Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.

The timer, which covers a range of 3 to 120 cycles, is accurate within 2%, according to the manufacturer.

The unit can be used with either 115- or 230-v. a.c. supply.



NEW *Dyes* AND *Chemicals*

Violet Dye for Printing Produces Excellent Brightness

A new dye, Calconyl Violet B Powder, said to produce a blue-shade violet of excellent brightness, is announced by Calco Chemical Div., American Cyanamid Co., Bound Brook, N. J. It was developed for either roller or screen printing on cotton or viscose fabrics.

The fastness properties of Calconyl Violet B Powder are not as good as the average vat or soluble vat print, but they are said to be good enough to make it desirable for a wide range of fabrics. Principal fastness ratings are: light, 3; cotton wash test No. 3, 4; dry crocking, 5; wet crocking, 3; hot pressing, 5; acid or alkaline perspiration, 4.

Its salient properties are reported to be economy, clearness of shade, and good working properties.

New Acid for Wool Dyeing Overcomes Tippy Dyeing

A new acid, Jones Acid, has been developed by Daniel H. Jones Laboratories, Inc., 222-226 Liberty St., Camden 4, N. J., for use in the dyeing of loose wool that has been either carbonized with aluminum salt or contains other metals. This acid is said to not only overcome tippy dyeing but also to replace acetic or formic acids in dyeing.

Jones Acid is reported to prevent the metal content of the wool from forming insoluble lakes out of the dyes. It gives more uniform distribution of color and greater tinctorial value with maximum fulling fastness. In the application of dyestuffs, Jones Acid is considerably stronger than acetic acid 56% and slightly weaker than formic acid 85%.

Information and samples are available from the manufacturer or the New England representative, Massasoit Products Co., West Springfield, Mass.

Nylon Hosiery Finish Gives Rich Dullness

A new nylon hosiery finish, known as Vibralon, is announced by W. F. Fancourt Co., Philadelphia, Pa. This finishing formula is said to give nylons a lasting rich dullness; soft feel; extra warmth; and other qualities to improve appearance, comfort, and wear.

It is said to give better moisture-absorbing qualities and an elastic firmness that makes the hosiery fit snugly without bagging, binding, or bunching. Hosiery treated with this finish are reported never to be cold and clammy or stick to the feet. The manufacturer states that Vibralon increases snag and pick resistance and prolongs life of the hose. It is said to be particularly effective on 15-den. monofilament hose.

This finish can be applied to nylon hosiery by either the conventional or the Dunn method. It is said to be readily adapted and modified to produce the individual degree of dullness, body, and hand that each hosiery manufacturer desires. Boarding, pairing, and handling are said to be easier; and the manufacturer states that a larger percentage of first-class hosiery is possible. The finish is available at present to a limited number of mills and in limited quantity.

New Fast-Color Bases Developed for Naphthols

A new series of stable fast-color bases, called Spectrolenes, is announced by Hilton-Davis Chemical Co., Cincinnati, Ohio. These color bases make possible rapid mixture with combinations of naphthols for a large number of brilliant shades.

Five fast-color bases—thoroughly plant tested, including actual mill runs—are now available in solution form. Others are in process of development, according to Nelson S. Knaggs, vice president in charge of sales. The colors are reported to have already proved effective for textile dyeing and printing. They are expected to be studied for application whenever naphthols and fast-color bases or salts are used.

These color bases are said to be completely diazotized and stabilized to prohibit coupling with naphthols in solution or with naphtholated material until the stabilizer is broken down. The base is released from the stabilizer by the action of acid or acidified steam, such as acid ager. This action permits complete coupling of the naphthol with the fast-color base.

Loss of color value caused by prolonged storage is said to be cut to a minimum. The colors are mixed fresh with the naphthols in the plant where they are to be applied. Freshness of the combination is said to make possible additional brilliance and color value.

Colors available at present are: Red KB, Red RC, Scarlet 2 G, Orange HD, and Blue B. Spectrolenes are supplied in drums of 450 lb. each.

Technical information and demonstrations of the application of Spectrolenes are available from: Blackman-Uhler Co., Inc., Spartanburg, S. C.; The Claflin-Dorman Co., Boston, Mass.; The Canadye Corp., Hamilton, Ontario; or from Hilton-Davis.

Optical Whitening Agent Has Strong Fluorescence

A straight optical whitening agent of the urea-stilbenesulfonate type has been developed by General Dyestuff Corp., 435 Hudson St., New York 14, N. Y. The agent, called Blancophor R, was developed for brightening whites and certain pastel colors on animal and animal-like fibers and as a sightening agent for textile printing pastes.

The brilliant violet fluorescence of this product is said to make outstanding whites from ordinary whites and to raise the brightness level of pastel blues, violets, and pinks. This strong fluorescence makes it useful for sightening in textile printing pastes.

Blancophor R is said to be effective for simultaneously whitening and brightening all textiles that have affinity for acid dyes. It is reported that by its use scoured wool can be made to approach stoved wool in whiteness and that all bleached or semi-bleached animal or animal-like fibers—whether wool, silk, nylon, or one of the wool-like synthetic fibers—can be considerably whitened in color at a savings in processing costs and fiber quality.

Optical whiteners should be employed as a supplement to the usual bleaching operations. They are not made to replace bleaching wholly. Of particular value in wool manufacture is the use of Blancophor R as a replacement for the stoving step in the final brightening of peroxide bleaches.

When Blancophor R is applied before or simultaneously with light pastel shades of blue, violet, or pink on fibers that have an affinity for acid dyes, the pastel colors appear as if they had been applied on a bleached bottom. The effect on medium or heavy dyeings, however, is not significant.

KERANOL nk

gives woolens, cottons and rayons a very desireable, soft full hand...

***Durable to Washing and Dry Cleaning**

Your woolen, cotton and rayon fabrics finished with KERANOL N K will have a truly mellow, glove-like hand, durable to washing and dry cleaning. KERANOL N K is unaffected by variable pH values, so may be used with greatest efficiency in neutral, alkaline or acid baths.

Mail the coupon for further information.

Additional – and highly valuable – use of KERANOL N K: as a plasticizer and softener in conjunction with all types of resin finishes.

EXCELLENT RESISTANCE TO YELLOWING!

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MANUFACTURERS OF INDUSTRIAL CHEMICALS FOR OVER 45 YEARS NEWARK, NEW JERSEY

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Gentlemen:

Please send, without obligation:

- ☐ full details on KERANOL N K
- ☐ sample and application procedure
- ☐ please have representative call

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THIS IS NO. 88 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

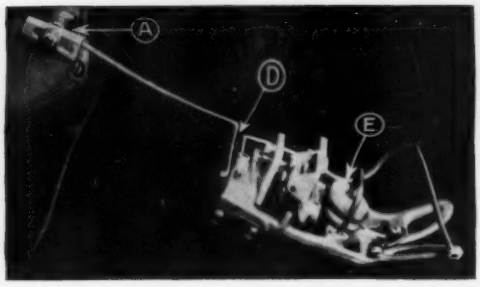

Fig. 1. Breakage lever properly set.

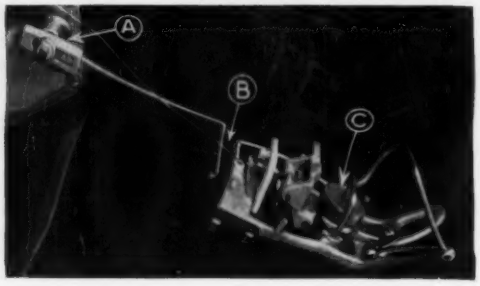

Fig. 2. Breakage lever set too far from tension bracket and improperly adjusted, requiring extra tension at C to hold down bail.

HOW TO SET THE BREAKAGE LEVER Roto-Coner*

The purpose of a breakage lever on a winding machine is to keep the stopping mechanism out of operation while the yarn is being wound and to actuate the mechanism quickly whenever the end breaks or runs out.

When the breakage lever is properly balanced and correctly positioned, yarn can be wound with a minimum amount of tension and without sacrificing winding speed. Counts of yarn finer than 100/1 can be wound even with only a felt washer (E) on the tension disc.

As illustrated in Fig. 1, the yarn, passing from supply to take-up package, travels *under* the tension bail and immediately afterwards *over* the breakage lever. This holds the breakage lever down and prevents it from actuating the stopping mechanism while winding is taking place. When a break or runout occurs the breakage lever is *released*.

The breakage lever should be adjusted and located to meet the following conditions:

1. It should rise *quickly* to actuate the stopping mechanism when an end breaks or runs out.

2. It should not vibrate or flutter during winding, nor should it require added tension on the yarn to prevent it from fluttering.

Obviously, if the breakage lever isn't properly balanced, it may require *extra* tension on the yarn in order to keep the breakage lever from rising. However, this practice is not recommended, because the extra tension makes hard packages, strains the yarn and, in the case of weak or fine yarns, causes unnecessary end breakage.

When the breakage lever is properly balanced, only a feather-touch contact is required between yarn and breakage lever. No extra tension is required to hold it down.

Balance is also affected by the proximity of the breakage lever to the tension bail. If it is positioned too far away from the bail (arrow B in Fig. 2), extra tension weights (C) may be required to hold it down, which is undesirable.

The proper balancing is accomplished by means of the counterbalancing clamps (A in Fig. 1) which have elongated slots permitting adjustment backward and forward to regulate the action of the breakage lever.

The proper method of making the adjustment is as follows (the Roto-Coner* can be kept in operation while this is being done):

1. Loosen the nut which holds the counterbalancing clamp.

2. With the left forearm, depress and hold down the starting handle; this leaves the left hand free to —

3. Bring the breakage lever down close to, but not touching, the back of the tension bracket, and also close to the tension bail as shown at (D).

4. Adjust the clamps backward or forward until they are in a position that will permit the breakage lever to rise promptly when the starting handle is released.

5. Tighten the nut that holds the clamp. The breakage lever should now be located close to the tension bail and almost touching the top of the tension bracket.

23.1.1

August 1951

WINDING AND TWISTING MACHINERY FOR NATURAL AND SYNTHETIC YARNS

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LETTERS FROM OUR READERS

Address all communications to:

Editor, *Round Table*, TEXTILE WORLD
330 West 42nd Street, New York 18, N. Y.

JAM NUTS ON SETSCREWS

Dear Editor:

In the article entitled "For Maximum Production, Keep Your Looms in Top Shape," on page 114 of your June issue, the last sentence in the caption under Fig. 2 reads: "Jam nuts should not be used on these setscrews because they pull the setscrews away from the rocker shafts."

May I suggest, since "action and reaction are equal, but in opposite directions," that any setscrew firmly seated exerts outward pressure and cannot be pulled outward by a jam nut without stripping the threads within the member held by the setscrew.

In over 50 years' experience fixing machines, we have had but two clutch members in which the setscrews jarred loose. That trouble was easily overcome by the use of jam nuts on the large setscrews.

WALTER A. SIMOND

Franklin, N. H.

DUCK-WEAVING POINTERS

Dear Editor:

The June issue of *Cotton Chats*, published by Draper Corp., includes information on the weaving of duck fabrics that it might be well to draw to the attention of your readers.

For example, the Draper people say that certain mechanisms should be on Draper looms before a mill undertakes to weave duck. These mechanisms include:

1. Roll and shaft harness motion, including cams on cam shafts that have positive pull-down parts
2. Drag rolls and a heavy reinforced lay
3. Proper warp stop motion and drop wires
4. A Midget feeler and Stafford thread cutter
5. A Nutting bar take-up (advisable but not essential)
6. 8¾-in. bobbins for larger-package shuttles
7. Beam heads as large as the loom will take
8. Take-up and let-off parts in good condition

Ducks are known to be hard for the average mill to weave; so the above pointers should be kept in mind. Even with the greatest of care in setting up model-E looms, for example, for shelter-tent duck weaving, efficiency will be less than normal and the quantity of repair parts needed will be greater than normal.

As long as duck is needed in the defense program, the enclosed information will be of use to weavers.

NEW ENGLANDER

Uxbridge, Mass.

TEXTILE CORRESPONDENT SOUGHT

Dear Editor:

For the past two years I have been an ardent reader of one or more American trade magazines. Because of the dollar shortage, many of the gadgets and novel ideas you introduce are unobtainable over here, and each fresh issue makes my mouth water with envy over the good fortune of American manufacturers.

Would it be possible for you to put me into contact with a textile executive who might like to correspond with a "poor country cousin," to exchange views and opinions both local and international, and to help me broaden my industrial mind?

I am 32 years of age and was educated at a large English public school and Oxford University. I am married and have two children. During the war I served abroad with the Royal Armored Corps and held the rank of Major.

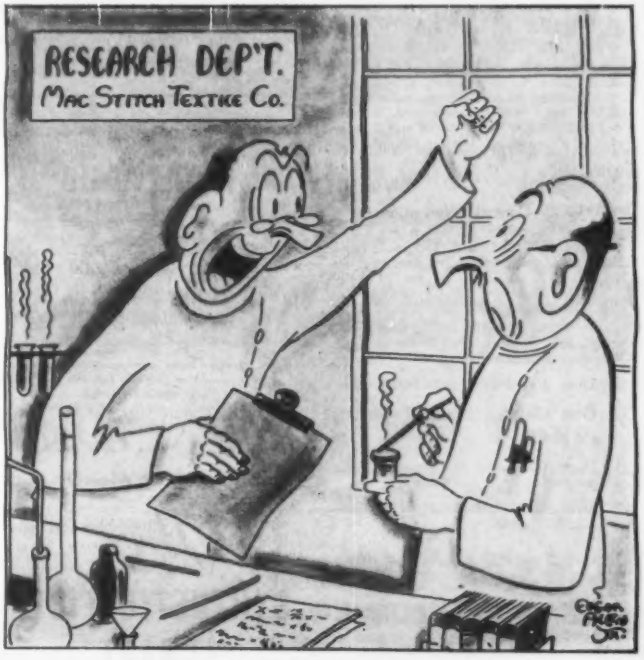
At present I am executive in charge of factory administration of a North Ireland textile mill that does weaving, dyeing, finishing, and garment making, employing 2,000 people, in Ulster.

DAVID DONNE

29 Alexander Ave.
Armagh, No. Ireland

[Would one or more of our readers like to correspond with Mr. Donne?—EDITOR]

TEXTILE TICKLES . . . . . *By Edgar Allen, Jr.*



"I've got it! Let's perfect a synthetic synthetic!"

SELECTING FOREMEN

Dear Editor:

The following standards should be applied when a mill is selecting and building up tomorrow's foremen and superintendents:

1. Does he know his machinery, its use and operation, supervisory-control methods over production, and the blending of employees and machines into a smooth-operating unit?

2. Does he have the ability to teach and to provide inspiration?

3. Does he have the good sense to pat an employee on the back whenever such recognition is due, and to withhold it for use only on those occasions when it has been fully merited?

4. Does he act as if he would be able to adapt newer employees to their jobs at the same time that he handles "old timers" properly so that they will provide valuable assistance to new, untried help?

5. In short, does he have the nature, the background, and the temperament to handle the above responsibilities successfully?

ERNEST W. FAIR

Bristow, Okla.

ON ADOPTING NEW METHODS

Dear Editor:

While I was in the engineering office of a Greenville mill the other day, I saw a general notice for supervisors in the mill that impressed me. Perhaps other mills and mill men will be interested in how this plant decides whether or not a new idea or change in method should be adopted.

"NOTICE—General Information for Supervisors

"I recently read the following and thought it so good that I am passing it on to you.

"In determining whether some new idea, or change in methods, should be adopted, the idea should meet one or more of the questions asked below:

1. Does it increase production?
2. Does it increase the ease of operating the plant?
3. Does it improve the quality of the product?
4. Does it decrease the cost of maintenance?
5. Does it improve efficiency or steadiness of operation?
6. Does it improve the appearance and utility of the plant, machinery, or production?"

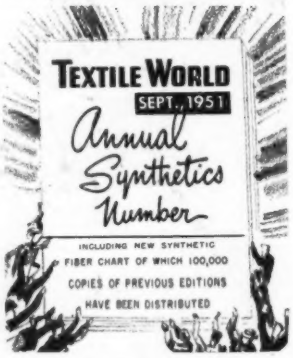
EARLE MAULDIN

Atlanta, Ga.

Test Your TEXTILE IQ

► **Each correct answer rates 10 points. A total of 70 is passing; 80, good; 90, excellent; 100—you're a genius! Keys to answers are on page 180.**

1. What new fiber was engineered to produce resilient fabrics?
   a. Dacron c. Vinyon
   b. nylon d. Orlon
2. Lugstrap holders should be kept:
   a. as low as possible c. 11 in. up
   b. as high as possible d. 6 in. up
3. Underframe cleaners are reported by Ga. TOE to:
   a. increase ends down c. reduce ends down
   b. increase yarn strength d. decrease traveler life
4. How should the warp stop-motion frame be set in relation to the whiproll?
   a. 1 in. higher c. ¼ in. lower
   b. even d. 1 in. lower
5. Most mills check yarn size at least once every:
   a. shift c. week
   b. day d. month
6. Standard size of the new triple-deck uptwister manufactured by U. S. Textile Machine Co. is:
   a. 75 spindles c. 150 spindles
   b. 600 spindles d. 300 spindles
7. What size beams will most 168-in. tricot machines accommodate?
   a. 14 in. c. 21 in.
   b. 17 in. d. 24 in.
8. New singeing equipment is in use that has a rate of production up to:
   a. 20 yd. per min. c. 50 yd per min.
   b. 35 yd. per min. d. 100 yd. per min.
9. Average sentences with 17 words can be understood by people with an education as low as the:
   a. 3rd grade c. 10th grade
   b. 7th grade d. 12th grade
10. What percentage of Southern workers belong to the CIO textile union?
    a. 1% c. 30%
    b. 15% d. 60%



Coming Next Month . . .

TW's *New* SYNTHETIC-FIBER CHART

► **The field of synthetic fibers gets more complicated and increasingly important every year. Whether you are now using synthetics or plan to work with them, you need the information in this revised, up-to-date chart. In its 22 pages it gives:**

- **FIBER PROPERTIES of all available synthetics, including Acrilan, Dacron, and dynel, for the first time**
- **YARN, STAPLE, AND TOW now commercially available, including the new fibers**
- **COTTON AND WOOL PROPERTIES listed for comparison with synthetic-fiber properties**
- **FOREIGN SYNTHETIC FIBERS listed with names and addresses of companies and their U. S. representatives—for the first time**
- **PRODUCTION AND CONSUMPTION review, pointing up trends of the natural and synthetic fibers**
- **U.S. FIBER PRODUCERS with up-to-date listing of names and addresses**

This fiber information is printed as a fold-in insert that can be taken out of the magazine and mounted on a wall or board for convenient reference.

Judging by the thousands of copies of the older charts that have been used, we think you will not want to miss this new one.

Look for it in your September issue of TW.

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Pointers FOR SUPERVISORS

How the Management Team Can Build Better Human Relations

How Accurate Are Your Job-Placement Tests?

▶ *What are psychological tests? What can they do for me? These are questions many textile supervisors are now asking, and apparently an increasing number of mills are turning to testing as a tool for placement of workers. But testing is not a complete cure-all for job-selection problems. Here are some points to remember in using tests in your job-placement program.*

By JAMES GARDNER

Assistant Director of Personnel Research, Fieldcrest Mills

A test is simply a measurement of a man's aptitudes or traits taken under standardized conditions. Placement tests should be measurements of aptitudes and traits that are pertinent to the job for which the applicant is being considered. The best way to decide whether a man will work out in a job is to try him in it. No psychological test can be as accurate as a trial in determining a man's suitability for a job. But a work tryout is a costly and time-consuming process. By means of tests you can get a reasonably accurate preview of an applicant's suitability within a few hours.

But the crux of the matter is this: Are the traits and aptitudes you are measuring the ones that are important on the job? Obviously, you would be wasting time to give a weaver candidate a mechanical-aptitude test if mechanical aptitude were not required in the weaving job.

It is possible, of course, to get clues as to required aptitudes and traits by analyzing the job. But these are merely hunches. Let's say that it was decided correctly, on the basis of the analysis, that a good weaver had to have a high degree of finger dexterity, among other things. Could we then run out and buy a pegboard that purports to measure finger dexterity and set ourselves up in the business of selecting weavers? This would be a sad and a very blind business, indeed.

Dexterity tests tend to be specific. A particular test does not measure all types of finger dexterity. The type of finger dexterity measured by a pegboard test may not be the type of dexterity required in weaving.

While the job analysis may give us some hunches about the aptitudes needed, it doesn't tell us if the hunches are right. And it doesn't tell us that we're using the right tests to measure these aptitudes, even if our hunches are correct.

The only way a conclusive answer about the usefulness of tests can be had is to check test scores against job performance. And make such a check by strict statistical techniques that will really tell you how valuable your tests have been in selecting suitable employees. The supervisor is not expected, of course, to have the expert statistical skill to make a genuine check on tests himself. But if the personnel department uses tests in referring applicants to him, it should also be able to evaluate their worth for him.

The process of checking test scores against job performance is the test of the tests themselves. If employees scoring high on a test are also high in job performance, you usually have a test that is useful for selection. If there is no relationship between test scores and job performance, the test is useless. The degree of the relationship (correlation) tells you how valuable your tests are.

The only way to tell the extent of the relationship is to apply a strict statistical check. Inadequate statistics are possibly more misleading than a claim based on no statistics at all. It is a rather common practice, for example, to say that a test is useful because "good employees" on a particular job have a better average score than "poor employees." The obvious question is whether this difference between test scores of good and poor employees is statistically significant. Is it a difference that chance could not account for?

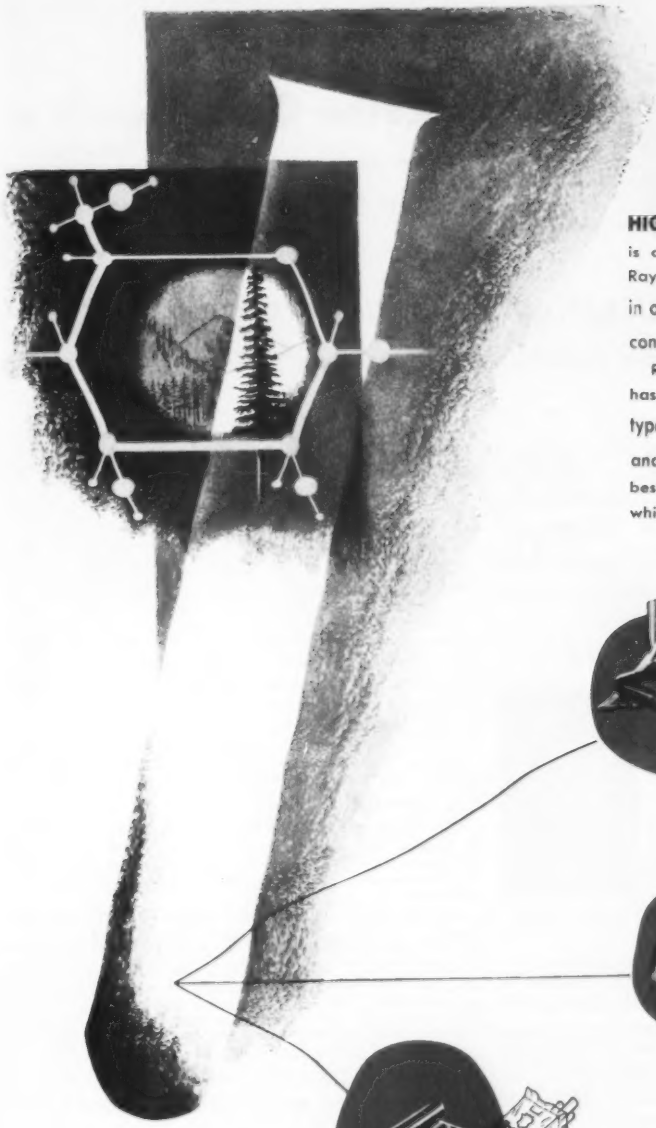
The claim is sometimes made that a test can select employees with 80% or 90% accuracy. Such a claim does not usually mean that the test will predict an applicant's precise level of performance within very small limits of error. It usually means that you predict that the applicant will land somewhere within a wide range of "satisfactoriness." For example, you have 80% of this sort of accuracy if 16 out of 20 people scoring above a certain level on a test are "satisfactory" or "good" or "above average" in job performance. This fact, however, is not a statistic that really tells you the extent of the relationship between test scores and job performance. Nor does it tell you how much of an improvement this "accuracy" is over your accuracy of placement without tests.

Still another weakness of some such claims is that the measure of job performance used is often a rating, the reliability of which is open to question.

Here are some other points to keep in mind about testing.

1. A single test is not likely to tap very much of that whole composite of aptitudes and traits needed for success in a job.
2. Since tests are specific, you don't measure dexterity and intelligence with a personality test or vice versa.
3. The measure of job performance against which test scores are checked should be a true and stable index of job performance.

(Continued on page 214)



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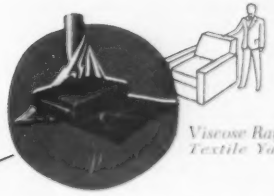

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Exploring

The Textile Community

By MILDRED BARNWELL ANDREWS

Educating the Educators Taps The Roots of Community Understanding

► *More and more steps are now being taken to interest educators in the methods of operation of mills and in their important social and economic contributions to the communities in which they are located. Here are some ideas that may help you, if your mill has been ignoring this positive approach to improving its community relations.*

MILDRED ANDREWS

"We'd like teachers from private, parochial and high schools to visit a textile mill . . . but we want the visit to be of the workshop type . . . We want the opportunity to educate our educators by seeing industry in action." This was the startling request made early in 1949 by the New England School Science Council of some leading members of the textile industry. The request resulted in a novel type of open house—the Educational Workshop. In the last two years several of these have been held; three in New England, two in the South, and with them a new horizon is sighted in the challenge of practical application of theoretical teaching in industrial areas.

At Crown Manufacturing Co., Pawtucket, R. I., where the first workshop tour was held, the Dean of Lowell Textile Institute said to the teachers who participated, "We are overlooking the educational facilities of industry . . . Schools can't do the whole job of education . . . It isn't just the techniques and the specific details you can use which are important—it is equally important to catch the exciting spirit of industry." The same thing was also stressed at the teacher visits held later at the Pepperell Mfg. Co., Biddeford, Me., plant and at the Naumkeag Steam Cotton Co., Salem, Mass.

In North Carolina the educational workshops were held in cooperation with the state's Department of Public Instruction. Teacher visits to mills have been held at Kannapolis where the high schools and junior-college teachers of Cabarrus County studies industry in action at Cannon Mills and in Leaksville-Spray where the teachers of Leaksville Township visited all plants of Fieldcrest Mills.

The preparations and plans that lift these tours out of the open-house bracket and make them part of a great educational program include a carefully prepared syllabus covering applicable questions, bibliography, and suggested projects for future classroom use on subjects such as Social Studies, Home Economics, Language, Arts, Mathematics, Science, Commercial Studies, Trades and Maintenance, Art, Geography, History, Civics, and Economics. Teacher groups, according to the subject, are conducted through the mills by enthusiastic guides who are competent to answer all questions relating to industry and the special subject under survey by the group. After the tour, the various groups go into session to discuss ways and means of applying their newly acquired information in their classroom. A general discussion is later given to the entire teacher assembly by group chairmen.

Such practical suggestions have come from the discussions as incorporating textile terms into stenographic courses, teaching LIFO-type inventory accounting, and adding "interviews" and job-application letters to language and grammar classes.

Each tour has brought out how few teachers working in textile communities are familiar with mill operations. For example, out of 40 in one New England group, only two had previously visited a mill. A similar ratio held true elsewhere.

Among the more impressive statements given by any teacher was that made in the South by a school principal, who also taught Social Studies. More than a hundred teachers from many township schools were having their final round-up of opinion after a buffet dinner served by its mill host. They turned to listen to this man, recognized in his community as a leader by teachers and parents alike. "For the first time" he said, "in 14 years of teaching in this community I have visited a mill which is the backbone of our community life. Today I have learned of the great loss if that expensive machine is idle or slowed down. I have learned, too, that large inventories of goods made by high-priced labor out of high-cost raw material may be a disastrous thing for a mill. Somehow I had never before realized the economic importance of an industry's success in relation to a community's welfare. The things I have learned by this workshop tour today have been so impressive they will reflect a complete reorganization of my teaching technique, because my own attitude toward industry is different."

Textile educational workshops planned through cooperation of state or regional departments of education and mills throughout all textile areas offer great opportunity for an educational triple-play—industry—to teacher—to youth. And it is the youth of today who will be the textile operators of tomorrow.

Always Uniform

Precision is never an accident. Unvarying quality must be put there by the maker . . . whether it's in Victor Mill Starch, bolts or screws.

Mill men know that Victor's uniformity shows up in better penetration, stronger warps, greater smoothness, fewer slashing problems.

That's why both Victor and the Keever man are known as "The Weaver's Friend."

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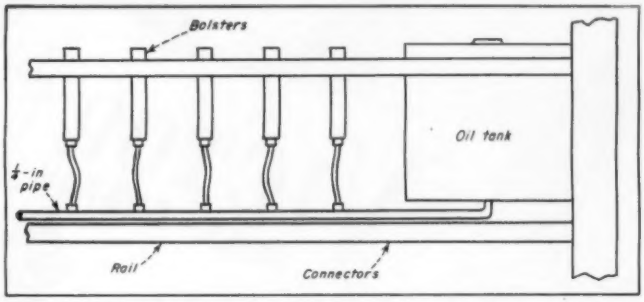
Kinks AND SHORT-CUTS

Our Spindles Are Self Oiling With This Device

We have some ball-bearing spindles that don't have oil cups on them. Our oiler used to have to stop off the frames to oil the spindles. He would raise each spindle out of the bolster, fill it with oil, and replace the spindle. It took him about one hour to oil each frame. Often, the tapes would come off and ends would come down when the bobbin was raised.

We installed this self-oiling device on our frames, and now all we have to do to oil the spindles is keep the tank full. Here's the way we installed the device.

We drilled and threaded holes in the bottom of each bolster. Then we ran a ¼-in. pipe along the bottom rail and made flexible-tubing connections from the ¼-in. pipe to the bottom of each bolster. We mounted a ½-gal. tank at the foot end of the frame and installed a connection from the bottom of the tank to the ¼-in. pipe. The top of the tank is level with the top of the bolster. We filled the tank with oil, and it will fill each bolster automatically. *W. N. Poe, Talladega, Ala.*



SPINDLES OIL THEMSELVES with this device. All you have to do is keep the oil tank full. The top of the tank is level with the top of the bolsters, and an oil line runs from the bottom of the tank to the bottom of each bolster.

Best-Kink Award for June

Each month TEXTILE WORLD awards $25 to the submitter of the kink which is judged by a panel of over 200 practical mill men as the best for that particular month. A new batch of kinks appears each month, and a new group of readers acts as judges each month.

If you are asked to judge one of these days, be sure to help select the best kink by sending back your answer in time for final tabulation. Closing date for judging is the last day of the month in which the kink appears.

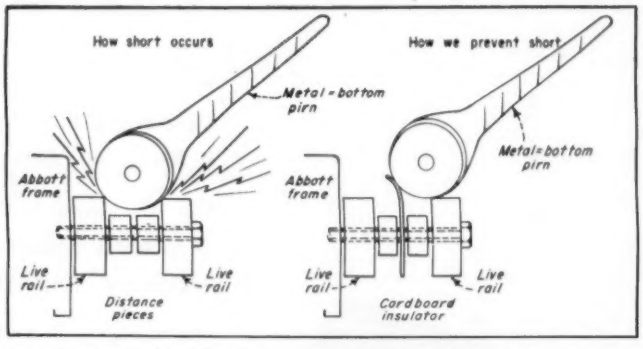
The best kink for June, according to TEXTILE WORLD reader-judges, was:

"Vertical Roving Trucks Reduce Roving Costs"

William C. Gibson, Jr.
Decatur, Ga.

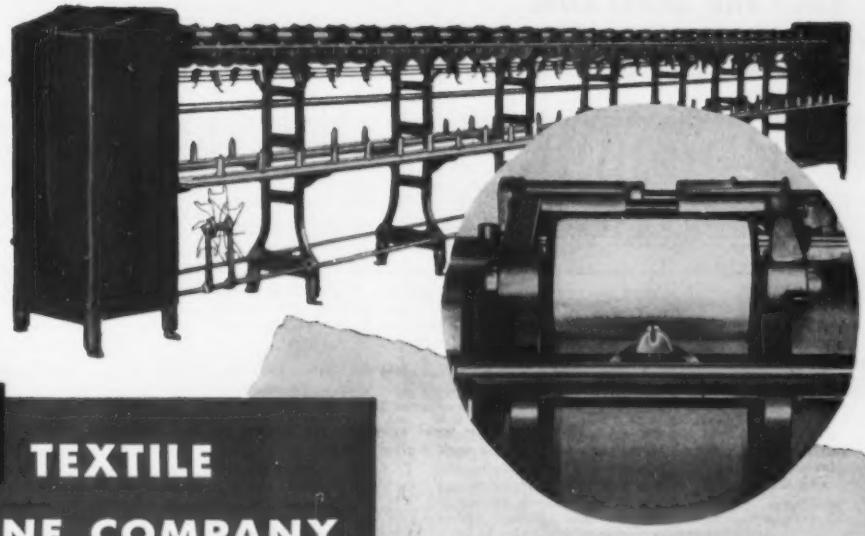
Mr. Gibson is being sent a check for $25 with the compliments of TEXTILE WORLD.

Here's How We Prevent Short Circuits on Filling Winders



ON ABBOTT FILLING WINDERS the current is supplied by two feelers on buzz bars on the inside of the track. When metal-bottom pirns are used, short circuits sometimes occur when a pirn falls on the buzz bar. Usually, this burns the bars, and you have to stop the machine to clean them.

We have eliminated these short circuits with a simple but effective method. We placed between the bars a strip of cardboard that stands ⅛ in. higher than the bars. The cardboard prevents the pirns from contacting both bars. We bend the cardboard slightly toward the truck to guide the pirns away from the buzz bars if they should happen to fall. *Walter Campbell, England.*



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ALSIMAG GUIDE
U. S. Textile No. SR-1-1049
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ALSIMAG® TRAVERSE THREAD GUIDES

FOR U. S. ACME HIGH SPEED SPOOLER

The U. S. Acme High Speed Spooler is used principally on fine denier synthetic yarns which very rapidly cut through ordinary guides.

This AlSiMag Traverse Thread Guide was adopted after comparative tests. Actual mill records proved their extra long life and economy.

The polished slot of this guide is 1/32" wide. It assures accurate control at the end of the traverse, creates a uniform wind, results in a package of uniform weight. These AlSiMag guides are accurate and are physically and dimensionally uniform. They are smooth, hard, homogeneous. There is no surface "skin" to wear through. Wear is very gradual, simply exposes new surfaces of the same character as the original.

REPLACEMENT GUIDES. U. S. Textile Machine Company, Scranton, Pa. carries these AlSiMag Traverse Thread Guides in stock in AlSiMag 192 for immediate shipment. The same guides may be ordered from American Lava Corporation, Chattanooga 5, Tennessee for shipment after normal production intervals. These guides can also be furnished by American Lava Corporation in AlSiMag 193 (same physical characteristics as 192 except that color is metallic gray and material is electrically conductive to assist in bleeding off static) or in AlSiMag 491 (super long wearing material, hardness of 9 on Mohs' scale, light blue in color).

TEST SAMPLES from our file sent without charge. AlSiMag Guides are Custom Made. Hand made samples of any design can be furnished at reasonable cost.

MORE AND MORE, LEADING MACHINERY MANUFACTURERS ADOPT ALSIMAG GUIDES

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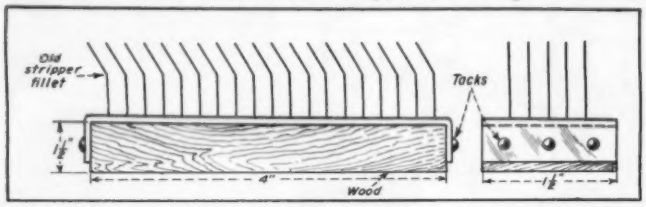
We Clean Clearers With Old Stripper Clothing



TOP CLEARERS on our drawing frames last much longer and give more efficient service now that we clean them occasionally with a piece of old stripper clothing. The cleaning prevents matting of the clearer and keeps the nap loose and free to pick up waste from the top rolls.

We tack the fillet tightly at each end of a block about 4 in. long and slightly wider than the stripper fillet. We furnish each frame tender with two of these brushes. He rubs these two brushes together to keep them clean and remove accumulated waste.

Caution: Don't let the frame tenders use the fillet board every time the clearers are picked. It'll cause clearer-cloth wear. About once a week is often enough.

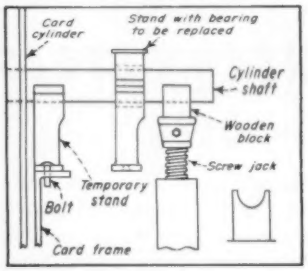
Hard Facing
Lengthens Runway Life

A hose-pressing machine in a mill in Australia had to be shut down every three or four months because of rapid wear on the cast-iron runway that guides the forms as they emerge from the steam chamber.

Here's how the problem was overcome.

The runway was faced with a tool-tip alloy by the usual gas-welding technique. The cast iron was found to be relatively high in sulphur, and a "buttering" layer of another alloy was put on first. The surface of the final layer was ground to shape. After 21 months service, the runway showed some signs of wear but appeared to still retain some useful life.

Here's How We Replace Bronze Bearings
On Our Card Cylinders



THE WEIGHT OF THE CYLINDER is taken off the cylinder stand by a screw jack after the flats and doffer have been backed off. The stand is loosened and moved along the shaft close to the jack. A temporary stand with a half-section of a bronze bushing is placed in position on the card frame, and the jack is lowered.

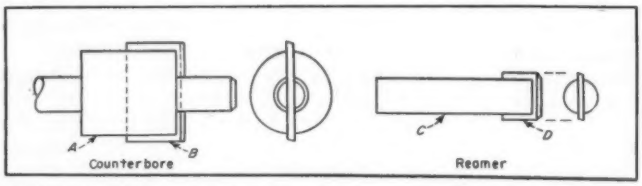
The regular cylinder stand and bearing are removed from the shaft, and the bushing is replaced.

The stand is slipped over the end of the shaft, the jack is put in place, the temporary stand is removed, the regular stand is put in place, and the jack can then be removed.

The bronze bearings or bushings on card cylinders must be replaced after many years of use, even with the best of care and lubrication. We detect the amount of wear on the bearings with a narrow, thin leaf gauge. When we can insert a 0.025-in. gauge between the top of the cylinder shaft and the bushing, we change the bushings.

The method we use to replace these worn bearings prevents the danger of slipping and damaging card wires and avoids the ¼-in. lift necessary to clear the lip on the lower side of the bronze bushings. We have to lift the cylinder only enough to take the weight off the cylinder bearings.

You Can Make a Counterbore and a Reamer



THESE TWO TOOLS are easily made; and while they are not quite as fast as twist drills, they do better work in both wood and metal. They bore smooth, straight holes and are specially valuable for drive fits and bearings.

Part A of the counterbore is turned from cold-rolled steel, or for woodwork it can be made from hard wood. This shank is slotted for the cutter blade *B* and is pinched slightly to hold the cutter. The cutter is ground to the size needed and is backed off slightly for clearance so that it will not drag in use. The cutting edges are ground as shown in the drawing.

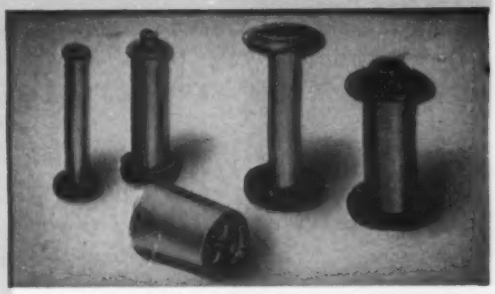
For the larger sizes, you can break off a piece of a discarded power-hack-saw blade and grind off the saw teeth for the cutting edge. Be careful not to ruin the temper of the blade. The diameter of part A should be less than the blade length, or diameter of the hole you want, to allow the chips to work out. An eighth of an inch less is sufficient. The pilot of shank A should be a good fit in the pre-drilled hole.

Part C of the reamer is a short piece of cold-rolled steel. It is slotted for the blade, which can be made from a piece of hack-saw blade. The blade is ground in the same way as the counterbore blade, except that when the blade has a short bearing in C and no pilot, the corners of the blade need to be beveled. The beveled blade enters the pre-drilled hole more easily and prevents rocking of the blade in the holder C. *Walter A. Simond, Essex Junction, Vt.*

SYNTHANE—the Material to Speed Textile Processes

SYNTHANE TEXTILE ROLLERS

Furnisher rolls, warp beam rolls and measuring rolls made from Synthane do not absorb moisture or dyes, hence are quickly and easily cleaned. They are light in weight, easy to handle, unaffected by oils or dye chemicals, and they resist wear. We can supply rollers accurately dimensioned to your needs, without metal cores where light weight is important, or Synthane may be laminated over cores for more strength.

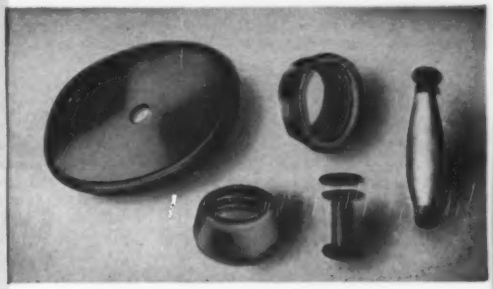


BOBBINS AND PIRNS

Synthane has many advantages as a material for bobbins and pirns. Synthane bobbins and pirns are hard, dense, smooth, dimensionally stable, moisture resistant, non-staining, light in weight, and they come machined to precise dimensions for perfect balance. They help attain increased spindle speeds, improved quality of finished yarns and lowered maintenance costs.

SYNTHANE TURNING AND EXAMINING FORMS

Synthane is smooth and stays smooth, will not snag or pull the finest denier yarns. Synthane forms are solid black throughout; the color cannot wear off. The dull finish is easy on inspectors' eyes, quickly shows up even the smallest defect. Synthane Turning and Inspection Form shown in center is latest, and one of most popular, forms. Note deep groove in which stocking rides during turning operation to prevent contact with the heavy welt yarns in the stocking top. Eliminates picks or pulls. Permits turning of the stocking before inspection instead of after. Also available with oval-shaped hole at toe end to facilitate turning.



NON-SNAGGING REDRAW CAPS

Synthane redraw caps are available in all types and dimensions. They are smooth, have no sharp corners, can't snag.

Bobbin type are low in cost, prevent damage to yarn, rehabilitate damaged bobbin heads. We will send you undimensioned drawings which you can mark to suit your needs. Write for them.

Pirn type permit drawing from wooden or paper pirns from any position without snagging. They may be used on bottom of pirn to prevent snagging from splinters on worn T-slots. Made in two sizes to fit a wide range of pirn types and sizes. Snap ring locks cap firmly in position.

SYNTHANE ALSO MANUFACTURES

- caps for sizing bobbins
- rayon cake holders
- traverse slides
- redraw chucks
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- drier pole rests
- balloon separators
- redraw tubes
- finger inserts
- hosiery mending cups
- bobbin bushings
- verge plates
- macerated gears and gear blanks
- spindle bushings
- spindle adapter tubes
- redraw caps for nylon shipping pirns
- hosiery carrying boards
- hosiery examining forms

Textile Division
SYNTHANE CORPORATION
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OAKS, PENNSYLVANIA

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Kinks AND SHORT-CUTS

We Use a Set-up Order Form For New Parts

NEW PART FOR STOCK

Dept..... Date.....

Machine..... Model.....

Name of Part .....

Catalog No. .....

Supplier.....

Number to Order .....

Minimum Order Point .....

Attach this memo to all orders for replacement parts not now kept in stock

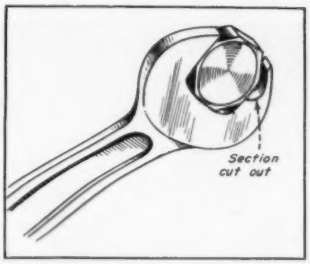
NEW REPLACEMENT PARTS are ordered on this form. Our department heads specify the number to order and the minimum order point. New parts must be ordered before, or when, the number of parts on hand reach the minimum number specified.

Failure to stock new replacement parts caused us delays several times in starting up machines that were stopped for repairs or replacements. We devised this set-up order form so that the stock room will have the parts on hand to fill later requisitions from the departments.

Before we started using this form, new replacement parts ordered by a department were often delivered directly to the department that ordered the part and the stock room would have none on hand.

The responsibility for setting up new parts in stock belongs to our department heads. They specify the number to order at a time and the minimum number to be kept on hand to meet all possible needs.

Our Erector Made A Speed Wrench



THIS MODIFIED OPEN-END WRENCH is used by our frame erector to speed up work when he has to take short strokes. Here's how it works.

One side of the open end is cut away for about half the distance from the end of the opening, as shown in the drawing. When the wrench is in use, the cut-out section is on the back side of the wrench.

When the tightening or loosening movement has been made as far as possible, the wrench is slipped back slightly until the short straight side is clear of the nut. The cut-out section is moved against the corner of the nut, and the wrench can be slid back without loss of contact with the nut.

After the wrench is moved to the new position, it is slipped forward until it is in full contact with the nut. It is then ready for another tightening or loosening movement.

This wrench speeds up work when it is necessary to take short strokes. You don't have to lift the wrench from the nut and then return it to a new position. The long side of the opening of the wrench keeps the wrench from slipping when the nut is being turned.

$200 for Best Kink in 1951
$25 for Best Kink Each Month

In Addition to Space Payment on Acceptance

You undoubtedly know of many kinks and short-cuts that are helpful to mill operators. Write them down and send them in. We pay promptly on acceptance—before publication. In addition, your kink may win the $200 check for the best kink of the year or the $25 check for the best kink of the month; maybe both!

Send in your kink now. There is always a contest going on. The more good kinks you send in, the better your chances of winning a prize in addition to earning some easy money for every kink accepted.

We will polish up your writing and will have an artist make finished drawings. But send in plenty of details so that your kink can be clearly explained. Be sure your sketch is clear and well labeled, but it need not be a polished job. Best of all, send us a good glossy photograph of it—we will pay you extra if you do and we can use it.

Look over the kinks in this and other issues. You will get ideas you can use as well as inspiration for kinks you can send in. We like items that pertain to ways for improving machines, new devices that a mill man can build, attachments or methods of merit—anything that will cut costs, improve quality, or help production.

Your published kink will be judged impartially by other mill men. In case of ties, duplicate prizes will be awarded.

RULES OF CONTEST

1. No limit to number of entries.
2. New $25 prize contest every month, $200 prize contest for the year. Monthly contest confined to kinks published that month, yearly to those published in calendar year 1951.
3. All kinks paid for on acceptance; extra payment for photographs. Drawings need not be finished (clear detailed pencil sketches will do).
4. Previously published material not eligible for prizes.
5. Unless you advise to contrary, we assume we may sign your name to kink when published.
6. Prize winners will be selected by readers, a different group each time. At least 200 will be asked to select preferred kinks in each issue. Their votes will select the best kink, and their decision will be final.

Send kinks to whichever address you prefer:

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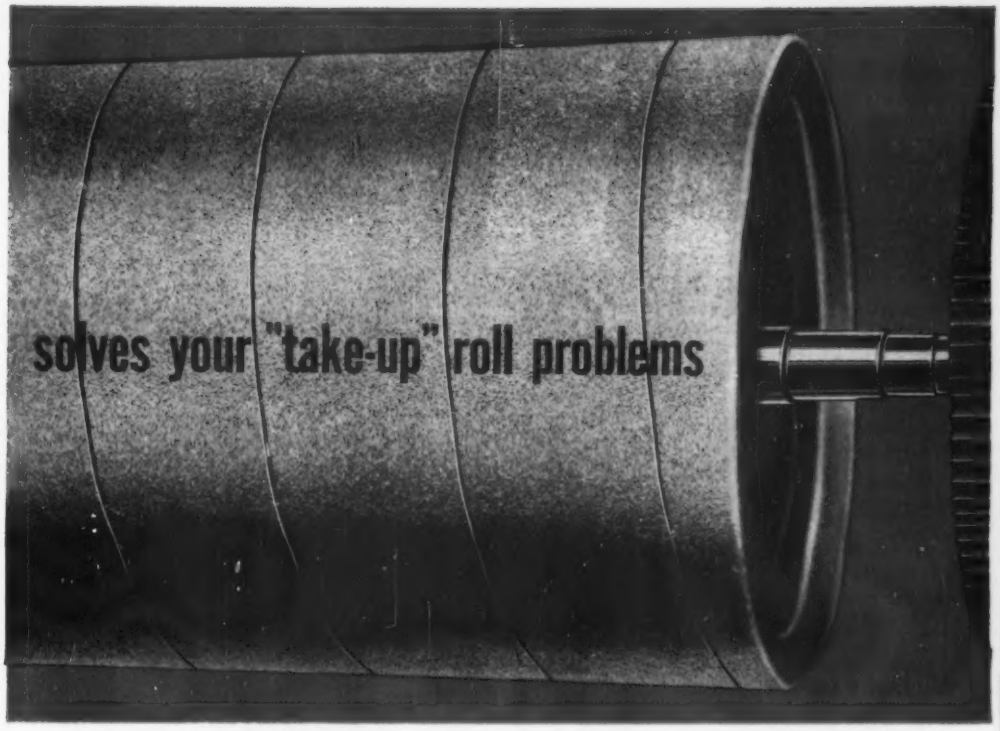
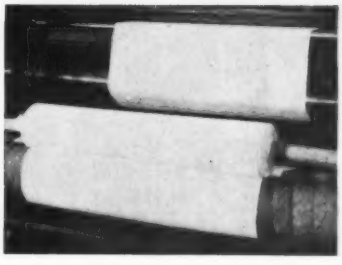
P. O. Box 305, Salem, Mass.





The positive . . . but gentle . . . gripping action of TEXALOX metalized cloth roll covering maintains a constant drawing tension without harming even the most delicate of fibres or fabrics. Quality and finish are improved. Cuts and chafe marks are practically eliminated. Delivery of definite lengths of material is assured.

These improved results are due to a strong flexible cloth backing to which selected evenly graded granular particles are firmly anchored. Lightly coated with metal, the hard durable surface is impervious to oil, grease and temperature changes . . . does not shed or wrinkle . . . is easily cleaned. A trial in your plant is convincing proof. Let our salesmen or representatives give you details. Or write Dept. TW 82-119.

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Metalized Roll Covering by CARBORUNDUM

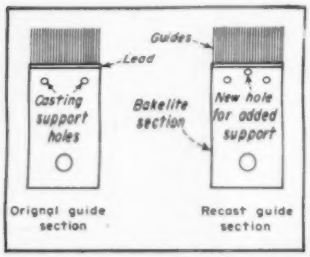
TRADE MARK

"Carborundum" and "Texalox" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, N.Y.

82-119

 For more information, write direct or use Reader Service post card.

How To Recast Tricot Guides in Bakelite



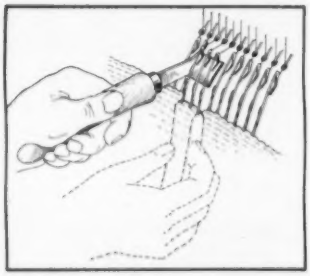
RECAST GUIDE SECTIONS are said to be as good as new if the new guides are cast to the bakelite section with liquid lead. An extra hole, as shown in the drawing above, will give added support to the casting.

On tricot looms of the Saupe type, the guides are cast in bakelite to keep down the weight of the guide-bar. After lengthy use, the guides get loose in the bakelite or they get worn out and have to be replaced. In some mills the new guides are cast all in lead, but we do not think that all-lead castings are satisfactory because the total weight of the guide-bar is increased to the point that its balance is upset.

We renew the guides in the old bakelite castings by a simple method. The original guides are fixed in the bakelite by means of a small amount of liquid lead poured into the guide-base channel and allowed to harden. The casting is held to the bakelite by the lead that runs into and hardens in two small holes in the bakelite. We drill the lead out of these two holes and take the guides out of the bakelite section. We then drill an additional hole in the bakelite to provide a better grip for the new guides. We put the bakelite section in the mold, with the guides back in place, and pour the liquid lead in. The lead cools off almost instantly, and the new guide section is completed—with three reinforcing lead anchors instead of two.

A word of caution—never cast in a cold mold because it is dangerous. Heat the mold before you pour the lead in.

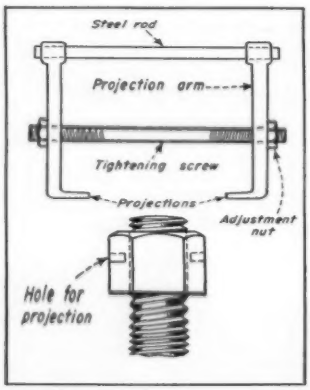
How To Remove Broken Needles



HERE'S A SIMPLE TOOL that will help you remove broken or damaged bearded needles from warp-knitting machines without tangling or catching the yarns. This pressing tool is made of brass or steel plate nearly equal to or somewhat wider than the needle mold. The handle is a little oblique to the plate so that it can be operated easily.

To remove the needles, insert the tool as shown in the diagram, push up the mold and then pull it down while you are pressing the beards with the tool. You can use it when the guide bars are behind the needles as shown. *Mineru Uno, Japan*

We Make Lock Nuts With This Device



LOCK NUTS and lock washers cannot be used in some places because of the space they require. We have made a small tool to lock regular nuts in place in locations where lock nuts can't be used.

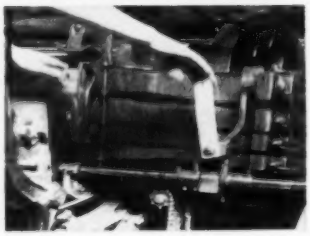
We drill small holes on opposite sides of the nut to be locked. These holes go about 90% of the way through the wall of the nut. We put the projections on the tool shown above into these holes and force them in the holes with the tightening screw. When the screw is tightened hard, the threads of the nut are forced against the threads of the bolt. The nut is then locked firmly in place. *W. E. Warner, England.*

Dobby-Jack Equalizer Gives Even Tension

THE DOBBY JACK EQUALIZER shown above was developed and is being used by The Goldtex Development & Manufacturing Corp., Goldston, N. C. They use it whenever two dobby jacks raise one harness. It compensates for the difference of travel between two adjacent jacks and gives even tension on each harness cord.

Double jacks are used with considerable advantage when a heavy fabric is woven on a few harnesses in a multiple-harness head. The double jacks tend to balance the dobby better, prevent dropped harness, protect the mechanism from undue strain, wear, and cord breakage. *H. E. Goforth, Burlington, N. C.*

Pressure Release Helps Weavers Change Shuttles



THIS PRESSURE RELEASE will help weavers remove or replace shuttles on looms equipped with floating binders. It is especially convenient on looms that have been converted to weave hand-fed work with four or more shuttles.

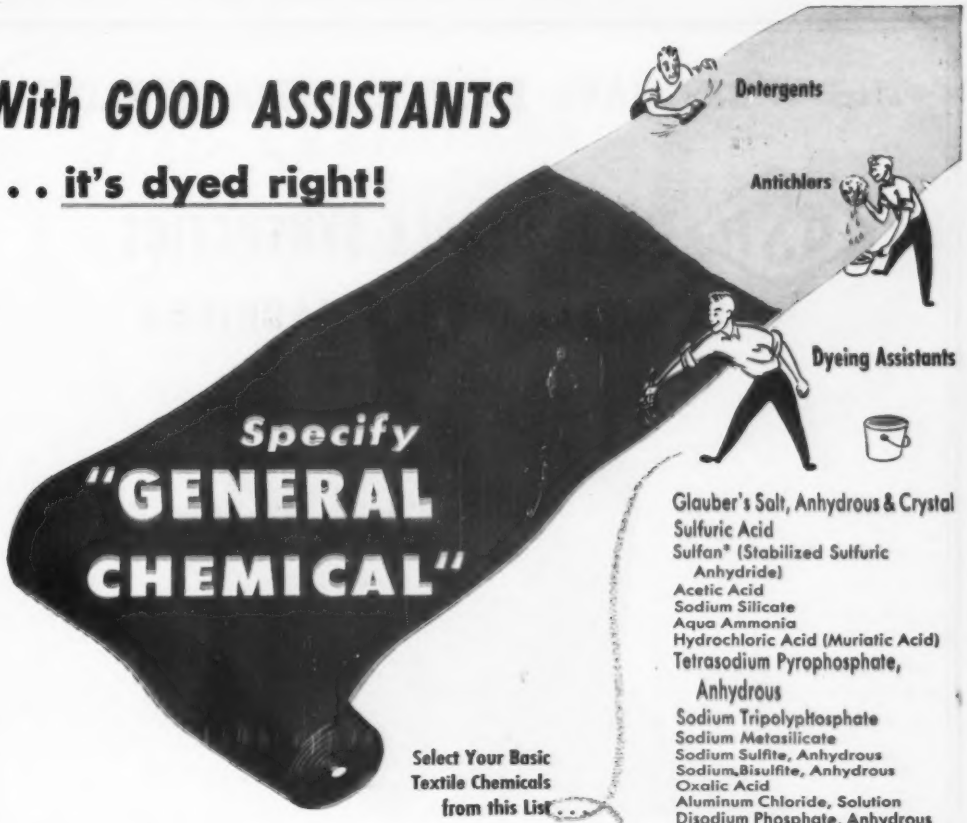
The release arm is made from a flat piece of iron or hard wood about 7x2x¼ in. Drill a 7/16-in. hole at one end. The back of a discarded shuttle will make a good release arm.

To install the device, remove the lock nut from the binder release-finger adjusting screw, and fasten the flat iron with the nut on the adjusting screw.

When you pull the release arm forward, the spring tension is released from the binders, and the shuttle may be taken out and replaced easily. *Eugene P. Schremp, Fulton, N. Y.*

With GOOD ASSISTANTS

. . . it's dyed right!



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- Sodium Tripolyphosphate
- Sodium Metasilicate
- Sodium Sulfite, Anhydrous
- Sodium Bisulfite, Anhydrous
- Oxalic Acid
- Aluminum Chloride, Solution
- Disodium Phosphate, Anhydrous
- Nitre Cake (Sodium Bisulfate)
- Trisodium Phosphate
- Sodium Thiosulfate (Hypo)
- Aluminum Sulfate
- Lead Acetate
- Mixed Acid
- Epsom Salt
- Chrome Alum
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*Reg. U. S. Pat. Off.

IN DYEING, the kind of results you get depend greatly upon the quality of the chemicals you use. Be sure they're always uniform, always dependable *before* your cloth tells you otherwise.

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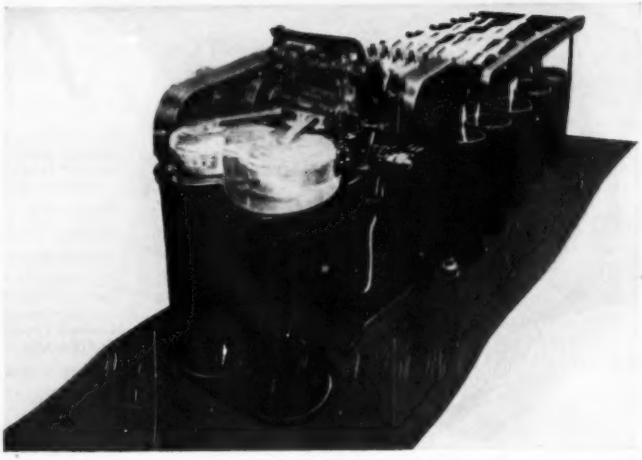

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Outstanding TRADE LITERATURE *Free for the Asking*

NO REPEATS . . . Listed here for August are current bulletins reviewed by the editors of TEXTILE WORLD. To get the ones you need, circle the number on the Reader-Service card, as described on the preceding page.

TEXTILE MACHINERY

Woolen ring spinning is discussed at length in a booklet prepared by Platt Bros. Ltd. A production table, details of frame types, and data on rings, spindles, and drives are included along with a complete set of sample calculations. There is a page devoted to description of a false-twist tube. **(F-1)**

Automatic brushing of reeds and harnesses is shown in a folder made available by Sam Vollenweider. Pictures show the machine in operation and also the result of its work. The brush itself consists of a grooved cylinder and replaceable spiral filler. **(F-2)**

Hosiery finishers will be interested in two new folders from Paramount Textile Machinery Co. The first folder describes a universal presetter for presetting and drying on all methods of nylon-hosiery processing. The second folder is about a transfer machine for women's half hose and anklets. **(F-3)**

Automatic knitting machines of a wide variety are presented in a booklet describing the complete line of Bentley Knitting Machinery Organization, Inc. Of particular interest is a new model JL Komet machine for jacquard rib hosiery. This machine is said to be new in the U. S. **(F-4)**

Drying, curing, and singeing equipment is described in a folder published by Industrial Heat Engineering Co. A brushing machine and a desizer are also shown. Unit heaters for direct firing of drying equipment can automatically convert oil into premixed gas as needed. **(F-5)**

Cloth spreaders and other equipment for the apparel branch of the industry make up a bulletin from Cutting Room Appliances Corp. Knit goods laying-up machines are also described. Other equipment includes cutting tables, a thread trimmer, special spreaders, and a measuring and inspecting machine. **(F-6)**

Cotton waste machinery is described in a folder made available by Platt Bros. Ltd. The line includes openers, pickers, cards, and spinning frames. Among the products made from soft and hard wastes on this special machinery are mop yarns, blanket yarns, upholstery yarns, cotton batting, and hosiery yarns. **(F-7)**

A selvage-trimming machine said to cut cloth-room overhead costs amazingly is presented in a folder published by Sam Vollenweider. Loose and looped threads from filling-checked fabrics are said to be completely removed. With an average cloth speed of 28 yd. per min., the machine is said to produce up to 16,000 yd. per 8-hr. day. Cloth speed can be adjusted to fabric requirements. **(F-8)**

AUXILIARY EQUIPMENT

The Centralograph—an instrument for measuring efficiency—is described in a bulletin made available by Ericsson Telephone Sales Corp. A general description of the functioning of the system is followed by three case histories—in worsted spinning, in mule spinning, and in weaving. The system is said to be applicable to a wide range of textile machinery. **(F-9)**

Tape tension idlers for twisting and spinning—idlers with gyroscopic action—are described in a folder issued by National Plastics Inc. Idlers for H & B, Saco-Lowell, and Whitin frames are shown. A 70,000-hr. continuous use of an idler is said to have resulted in little wear—without any lubrication in 8 yr. **(F-10)**

Self-lubricating bearings of wood or metal are catalogued in a release from Wakefield Bearing Corp. A supplementary sheet describes a host of other wooden products—turnings, flat work, swifts and swift parts, and specialty products. A free loom-sheave ash tray is also offered. **(F-11)**

Motor controls are the subject of a new edition of a catalog from Allen-Bradley Co. A special a.c.-d.c. index along the margin of each page speeds use of the catalog. **(F-12)**

Variable-speed drives for a carpet mill are presented in a recent issue of *Link-Belt News*. The complete mill of James Lees & Sons Co., Glasgow, Va., is pictured and described. Machines using variable-speed drives include backwasher, beamer, slasher, and shear. **(F-13)**

Running-time recorders are described in a new bulletin issued by The Bristol Co. The bulletin is illustrated with pictures of various models, reproductions of chart records, and operation drawings. Several installation pictures are also included. **(F-14)**

Recording viscometers for manual or automatic control of viscosity are described in a bulletin published by Norcross Corp. Besides showing the design and operation of the viscometer, the booklet also gives several textile applications. Sample charts show how size uniformity was improved. **(F-15)**

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Reader Service (Continued)

Chain drives and conveyors are the subject of a bulletin issued by Chain Belt Co. The bulletin tells how to get the most service from your sprocket chains. "No matter how good the chain itself is," says the booklet, "it will not give 100% satisfaction unless it is properly installed and operated." **(F-16)**

Instrumentation for yarn conditioning and twist setting is described in a data sheet from Minneapolis-Honeywell Regulator Co. Accelerated conditioning is said to be possible with the new controls. A clear schematic diagram shows how the control operates. **(F-17)**

SUPPLIES AND CHEMICALS

Mildewproofing—as applied to gov't. specifications—is the subject of a release from Sindar Corp. Specifications under which G-4 (Dichlorophene) may be used are listed in chart form and grouped according to the specifications of the various Armed Services. **(F-18)**

"Textile Applications of Nacconol NR" is the title of an article published by National Aniline Div., Allied Chemical & Dye Corp. The article, written by Dr. O. M. Morgan, is said to be the first complete description of the uses of synthetic detergents in the textile industry. The publication is filled with new methods and short-cuts. **(F-19)**

A new oil additive—Luberoil—is described in a booklet issued by Luberoil Petroleum Corp. The new product is said to reduce friction by multiplying film strength and increasing affinity of the oil for metals. Positive lubrication, with possible reduction in oil consumption, is listed as an additional advantage to the main feature of reducing friction. **(F-20)**

How are your batteries? Globe-Union, Inc. has issued a battery service manual prepared by the Assn. of American Battery Mfrs. The various phases of battery care are covered in the comprehensive manual. Sketches and pictures make the principles easy to read and understand. **(F-21)**

Wood tanks for industrial use are the subject of an informal booklet issued by The Hauser-Stander Tank Co. The booklet tells how wood tanks are made, banded, and used. **(F-22)**

Vat-dyeing of wool is discussed in a recent issue of *Dyelines and Bylines*, American Cyanamid Co. publication. Among the factors discussed are temperature, alkalinity, dyeing time, loading, and pressures. **(F-23)**

A new knitting-machine lubricant said to reduce needle wear and breakage is described in a booklet prepared by Sun Oil Co. Complete scourability and excellent light stability are said to make the oil particularly adaptable for needles, sinkers, and other parts. Another product, a multipurpose oil for all types of textile machinery, is also described in the booklet. **(F-24)**

"The Story of Kaylo" has been made available by Owens-Illinois Glass Co. The material, a calcium silicate with microscopic air spaces, is recommended for insulating roof tile, pipe and boiler insulation, and as the core of fire doors and building panels. **(F-25)**

Surface-active agents—Triton and Hyamine—are described in a booklet issued by Rohm and Haas Co. One section deals with the preparation of emulsions. Ten tables record data on surface and interfacial tensions, wetting time, spreading coefficients, foaming values, and stability. Ten specific textile applications are described. **(F-26)**

A new Calco technical bulletin—"Dyeing of Wool Stock and Slubbing with Vat Colors"—has been prepared by American Cyanamid Co. Written by S. J. Luscian, the bulletin contains much valuable information for wool dyers. **(F-27)**

ENGINEERING AND MAINTENANCE

Air-conditioning equipment of all types has been catalogued by Westinghouse Electric Corp. Covered in the catalog

This nationally known tanner and manufacturer of work shoes and gloves writes us . . .

". . . You recommended to us LUBRIPLATE NO. 100 for lubricating the chain drive on our paddle wheels which turn the hides immersed in a solution in concrete vats. The chain, during use, is always soaked. The solution is sometimes acid and sometimes caustic. Up to the time of your recommendation, we had not found any lubricant that would stay on the chains for any appreciable time.

"Heretofore, the average life of a chain was approximately one year. We have applied LUBRIPLATE to these chains every two weeks for two years. Since then, not one new chain has required replacement, and they are still going strong.

"At this time it appears that *for every dollar we have invested in* LUBRIPLATE, *we have saved seven dollars* in chains with actual savings still to come."

WOLVERINE SHOE & TANNING CORP.
Rockford, Michigan

You, too, can enjoy the savings made possible with LUBRIPLATE Lubricants. There is a LUBRIPLATE product for every industry. LUBRIPLATE reduces friction and wear, prevents rust and corrosion and is most economical to use. Write today for case histories of savings made possible by the use of LUBRIPLATE Lubricants in your industry.

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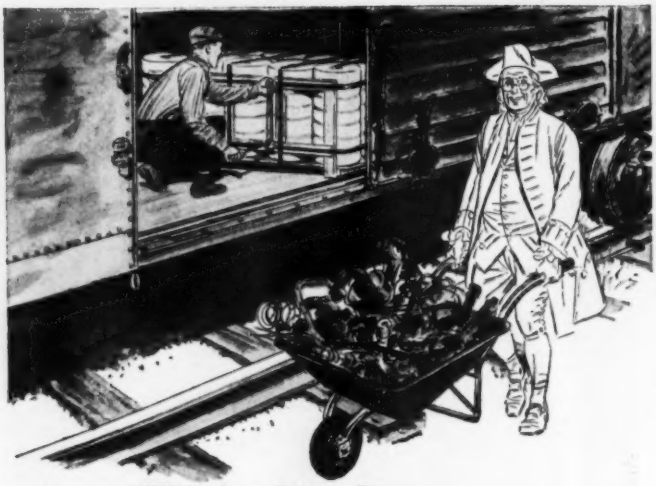

"Think of saving as well as of getting."

—Ben Franklin's Almanac, 1757

Scrap steel saved today can help steel products come thy way.

—Acme Steel Notebook, 1951

The current shortage of scrap steel makes the supply picture serious for all users of steel products.

Even before this scrap shortage faced the steel industry, increased civilian consumption and increased military needs made it impossible for Acme Steel to meet all the needs of all its 50,000 customers.

So save scrap steel. And, to make the best use of the Acme Steel products available to you, let your Acme Steel representative work with you on ways to increase efficiency, eliminate waste, maintain hard-to-replace equipment in your packaging, shipping and materials handling.

We will continue to help you—the way we have helped our customers for more than 71 years.

Save scrap steel today. *Get* more steel products tomorrow.

How you can help in the scrap drive.

1. Do a thorough housecleaning job in your shop. Collect all scrap steel, no matter how small.
2. Check your equipment now! Junk all machines worn out or broken beyond repair.
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4. Sell your collection to a dealer in metal scrap. He will see it gets where it is needed.

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ACME STEELSTRAP flat steel strapping and ACME UNIT-LOAD carload bracing BAND, SEALS and TOOLS • ACME SILVER-STITCHERS and ACME SILVERSTITCH WIRE for box stitching • ACME-MORRISON METAL STITCHERS and BOOK STITCHERS • ACME-CHAMPION BAG STITCHERS • ACME HOT AND COLD ROLLED STRIP STEEL • ACME GALVA-BOND steel slat stock for Venetian blinds • ACME STEEL SPECIALTIES, including hoops, corrugated fasteners, barbed box straps, nail-on strapping and other container reinforcements • ACME STEEL ACCESSORIES—snips, tool mounts, reel stands, coil holders, coil trays.

Reader Service (Continued)

are: hermetically sealed compressors, condensers, water coolers, heating coils, cooling coils, air-handling units, heating and ventilating units, surface dehumidifiers, air washers, filter washers, self-contained air-conditioning units, heaters, fans, and compressors. **(F-28)**

Do you have a special handling job? You'll be interested in a special engineering folder prepared by Towmotor Corp. None of the custom-engineered developments shown are standard items. There are 24 such trucks shown. Maybe you'll see an idea that will help you solve that handling problem. **(F-29)**

Chemical-resistant plastic pipes and fittings are described in a bulletin prepared by American Hard Rubber Co. Resistant to most chemicals, the materials are said to be light weight, tough, and durable. Tables list properties and resistance to common chemicals. Bursting and working pressures, standard sizes and weights, and information on complete plastic piping systems are all included. **(F-30)**

Slimline fluorescent-lamp features are described in a booklet published by General Electric. Ten basic advantages of "slimline" lamps are listed. Four details of construction explain why higher initial cost is actually a saving. **(F-31)**

Hand lift trucks are described in a bulletin issued by Barrett-Cravens Co. Three new models are included in the line. Capacities of 1,000 to 15,000 lb. are available. One chapter of the bulletin tells how to select the proper-model lift truck. **(F-32)**

A package steam generator in operation at Cold Spring Dyeing and Finishing Plant, Beacon, N. Y., is described in a recent issue of *Heat Engineering*, a publication of Foster Wheeler Corp. The generator was assembled at the factory and was simply set on six legs and connected after delivery. **(F-33)**

Metallizing has received increased attention since NPA Regulation No. 4 went into effect. Your MRO allotment may go further if you follow a few simple rules, according to a bulletin from Metallizing Engineering Co., Inc. Nine examples of savings are pictured. **(F-34)**

Warp trucks that handle warp beams, cloth rolls, and section beams are described in a folder prepared by J. W. Lewis & Co. The trucks are designed to carry warps high enough to clear most whiprolls when the alley width is less than the beam diameter. **(F-35)**

A new starting switch is described in a bulletin from Allen-Bradley Co. The manual switch, for a.c. and d.c. motors, comes in models that include a key-operated switch useful where unauthorized operation is to be prevented. **(F-36)**

Roller-bearing users will be interested in a new catalog put out by Shafer Bearing Corp. Every Schafer bearing consists of concave rollers operating between matched convex races. Self-alignment and high shock-load capacity are said to be advantages. Bearing units now come in sizes up to 5-in. diameter. **(F-37)**

Mobile ladders of all-steel construction are described in a bulletin made available by Ballymore Co. Models with 1 to 8 steps accommodate heights up to 11½ ft. Casters retract automatically when weight is put on the ladder, and rubber-tipped legs then hold the ladder securely. **(F-38)**

A new material for resurfacing worn or broken concrete is described in a folder from Dura-Tred Co. Features of the material (Flintz) are its ¼-in. coating and low-traction surface. The resurfacer comes ready-mixed and dries overnight. **(F-39)**

A new flotation separator for removal of suspended solids from waste water is described in a bulletin issued by Sveen Pedersen Sales Corp. The unit also partially removes biological oxygen demand (B.O.D.) **(F-40)**

Materials-handling equipment of many types is described in a catalog prepared by Yale and Towne Mfg. Co. Subjects

For New Promotion of WOOLENS

Far-seeing mill management realizes that price alone does not move woolen products out of the retailer's stocks. It is taking real promotion to do it in the face of strenuous competition—promotion beyond the "sales gimmick".

Easily the most effective promotion of wool products today is *durable* moth-proofing—MITIN* Mothproofing !

Retailers have proven that a MITIN hang-tag sells goods—have found that the consumer is genuinely interested in a MITIN Mothproofed fabric and is willing even to pay a premium for the worry-free, work-saving, money-saving protection against moth damage.

MITIN is strictly a mill product. Applied in the mill and *only* in the mill, MITIN is a colorless dyestuff, as fast as many of the faster wool dyestuffs. MITIN gives the consumer genuine dyed-in-the-wool moth protection.

Try it in a single promotion. MITIN will move your goods!

Some mills have found MITIN economical for the protection of their own stored fabrics in addition to MITIN'S sales promotion value.

* U. S. Pat. No. 2,311,062

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Dyestuff Makers Since 1859

GEIGY COMPANY, *Inc.*

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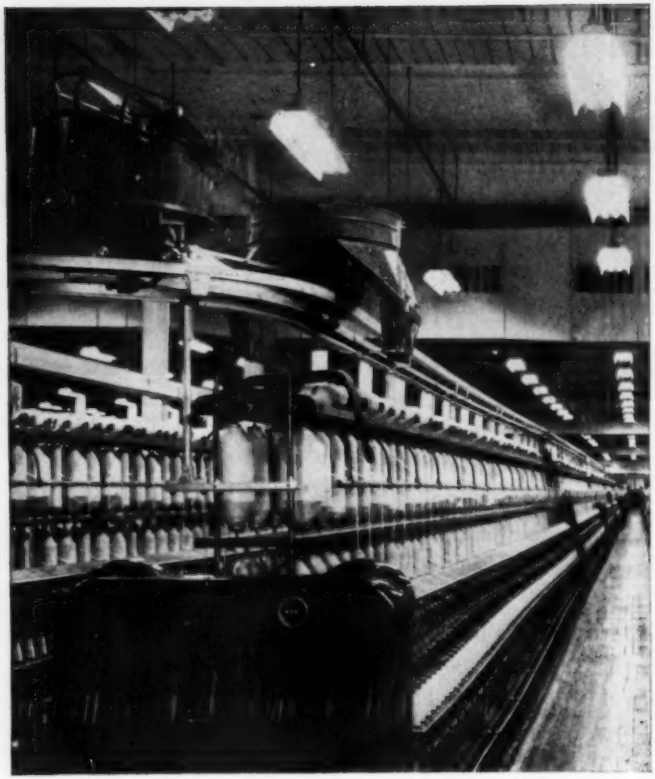


Continuous Cleaning

Ringrail to Rafters

They surely must be doing a job, these Parks-Cramer Traveling Cleaners, for they are now standard equipment for more than 17,000,000 spinning, twisting, winding, spooling, and warping spindles.

And now its own twin, the Up-draft Cleaner, prevents lint accumulations topside. With Frame Cleaners, it runs tandem. In cardrooms or in other preparatory areas, it runs solo. And will it keep lights, conduits, ducts, and such, clean? You wouldn't know the place!

Parks-Cramer Company

Fitchburg, Mass. PARKS Certified Climate Charlotte, N. C.

Reader Service (Continued)

covered include gas and electric fork-lift trucks, motorized hand trucks, hand lift trucks, and hand and electric hoists. One section deals with attachments that give versatility to basic trucks. **(F-41)**

Data on heat-transfer problems is given in a manual published by Kold-Hold Mfg. Co. The data, which covers the use of Platecoils as a medium of heat exchange, is based in part on work conducted at Batelle Memorial Institute. Charts and formulas aid in the basic calculations required in selecting the equipment. **(F-42)**

How you can get more stainless-steel pipe for your money is described in a booklet issued by The Carpenter Steel Co. The new idea is based on lighter walls with normal outside diameter but greater inside diameter than standard stainless-steel pipe. The pipe is said to meet ASTM specifications such as A-268, A-268, and A-312. **(F-43)**

Improved air conditioning is discussed in a folder issued by Air-Perme-Ator Mfg. Co. The "dry" humidification is said to keep mill air fresh and clean without mist or spray to rust machinery or damage cloth. Slow starting on Monday and static electricity are said to be minimized. **(F-44)**

GENERAL

Denim manufacture at Lane Cotton Mills Co., New Orleans, La., is one of the features in a recent issue of *Esso Oilscope*. There is a particularly clear explanation of the Sanforized process. **(F-45)**

Cotton classers will be interested in a folder from Macbeth Corp. A cotton-classing skylight and a new Examolite are thoroughly described. Both systems are said to meet U. S. Dept. of Agriculture specifications. **(F-46)**

"Know Your Fire Extinguishers," a new employee-training film, is described in a folder issued by Factory Mutual Engineering Div. In color and with sound, the film emphasizes which extinguisher should be used for each type of fire. **(F-47)**

Laminated plastics for sheets, tubes, and rods are the subject of a series of tables prepared by Synthane Corp. All systems of grade specifications as drawn up by industry and various government agencies are included and compared in the tables. **(F-48)**

Two booklets on mercerizing have been made available by Dexter Chemical Corp.: 1) variation in the removal of pectic substances from cotton yarn in the mercerization process, and 2) luster determination with a photo-electric photometer. **(F-49)**

The Wool Bureau, Inc., has issued a comprehensive booklet titled "Suggested Research and Development Studies for the Woolen and Worsted Industry." The publication also includes information on current research in the field. **(F-50)**

Answers to Textile Quiz

On Page 160

1. a. [TW, June, '51, p. 112]
2. b. [TW, June, '51, p. 115]
3. c. [TW, June, '51, p. 106]
4. c. [TW,, June, '51, p. 104]
5. b. [TW, June, '51, p. 109]
6. d. [TW, June, '51, p. 120]
7. c. [TW, June, '51, p. 121]
8. d. [TW, June, '51, p. 147]
9. b. [TW, June, '51, p. 170]
10. b. [TW, June, '51, p. 4]

Guaranteed

THE QUALITY OF BOGER & CRAWFORD KNITTING YARN IS GUARANTEED — THE HIGHEST TRIBUTE WE CAN PAY IT.

Signed Frederick Boger

Quality Yarns

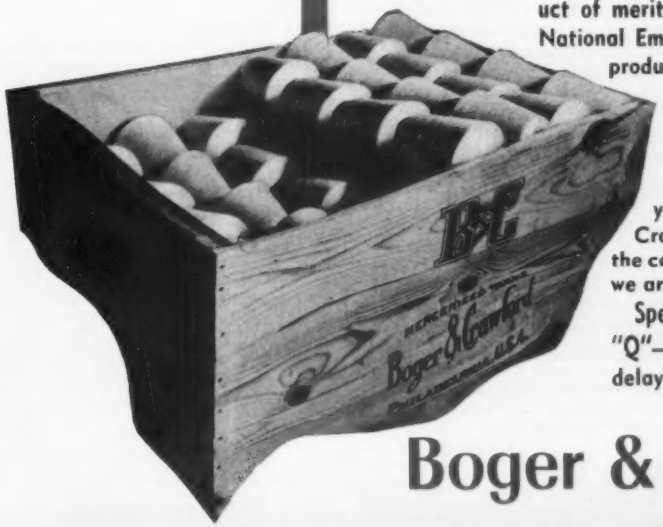
. . . A Guarantee That Has Held For 44 Years and

. . . Is Doubly Important In The Present Emergency

Let Boger and Crawford yarns help you produce a product of merit! You are called upon in the National Emergency to do the best possible production, and here Boger and Crawford yarns can help you.

With every order you are protected by our guarantee of quality. Industry over the years has constantly used Boger & Crawford's product, and because of the constant accuracy of performance, we are looked upon with confidence.

Specify Boger & Crawford Vitamin "Q"—"Q" for Quality—yarns without delay.



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Original floor of Northern Hard Maple, New Bedford Knitting Co., New Bedford, Mass.

NORTHERN HARD MAPLE

the finest floor that grows

Strictly in the tradition of America's textile crafts, this New England mill floor was laid years ago with resilient, enduring Northern Hard Maple. Its builders turned, almost instinctively, to this splendid product of our native forests, secure in the knowledge gained through the experience of generations of textile manufacturers. They knew that good Northern Hard Maple is preferred for sound reasons. Its close grain structure offers no crevices; its pronounced stability of dimension makes for tight joints—hence little chance for dirt to lodge. Simple sweeping routine keeps it clean and attractive. It doesn't splinter. Its resilience resists dents. It's bright, light-reflecting, cheerful. It "feels good" under foot—workers prefer it. It *lasts* and *lasts* . . . and, come refinishing-time, "there's always a new floor underneath." If you're planning new or expanded mill facilities, be sure to specify MFMA-graded Northern Hard Maple. You know it's right in every respect. And it's available. And it's economical.

See Sweet's

Architectural, 13i/MA, for specifications and full data.

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BEECH AND BIRCH

Useful Accessories For Textile Mills

▶ To request further information on any item, please use the card in the Reader-Service dept.; refer to the number at the end of the item concerned.

Materials Handling

Battery-Operated Stacker

A combination fork-lift stacker and hand truck with elevating platform operating from a standard six-volt automobile battery has been announced by Clark-Hopkins Equipment Corp., 1124 Spring Garden St., Philadelphia 23, Pa. The stacker is said to be capable of moving, lifting, and stacking loads up to 750 lb. The unit has a battery-activated motor mechanism that operates the hydraulic lift. A built-in battery charger is designed to replace any current drain on the battery during off hours. The stacker has a platform 21 in. long and 18 in. wide. Loading height is 55 in. (U-1)

Pressure-Tape Dispenser

A new two-speed pressure-tape dispenser, for use in dispensing measured lengths of all types of industrial pressure-sensitive tape in widths up to 2 in., has been announced by Better Packages Inc., Shelton, Conn. The Big Inch #20 has a new patented dispensing principle that avoids the extreme curling of certain tapes. The two-column measuring scale gives length settings for long or short strips without waste of material. Change gears are provided to give a choice of long tape (feeding up to 10 in. per stroke) or short tape (up to 6 in. per stroke). (U-2)

Rider-Type Electric Truck

A new rider-type, low-lift electric truck designed to handle both single- and double-face pallets has been developed by the Lyon-Raymond Corp., 95-83 Madison St., Greene, N. Y. The SpaceMaker Low-Lift is said to speed up handling by enabling the operator to ride while picking up and delivering unit loads. This method is said to eliminate slowdowns that occur with powered, walkie-type hand trucks that constantly stop and start. The truck travels up to 5 mph. with 4,000 lb. loads, and up to 6 mph. when empty. (U-3)

Stoker-Feeder Conveyor

A stoker-feeder screw conveyor has been anounced by the American Coal Burner Co., Inc., 19(B) E. Erie St., Chicago, Ill. The Flo-Matic conveyor has

Spark your line with smart ribbed hose in a rich variety of patterns

made on the

S&W Modern Komet Links & Links Machine

Using all the popular new yarns (as illustrated by the six hose below with their various combinations of plain ribs), the S&W Modern Komet Links & Links Machine produces an endless variety of men's ribbed hosiery. Tops are ribs in varying widths with or without rubber; legs and feet are plain stitch, single or broad ribs to toe, or Links and Links patterned. Diameters up to 4½", and all gauges from coarse 84 needles, 12 gauge, to fine 240 needles, 54 gauge inclusive.

Fullest range in yarns, gauges and patterning — truly a universal machine! Send for new descriptive folder or ask the Scott & Williams representative for full information.

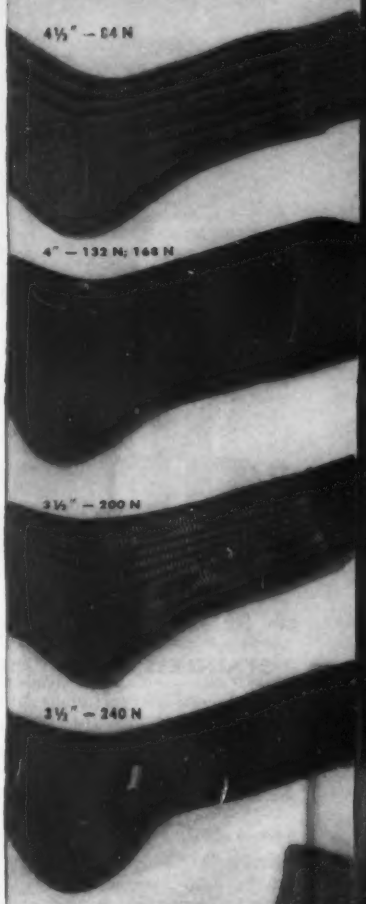
S·W **SCOTT & WILLIAMS, INC.**

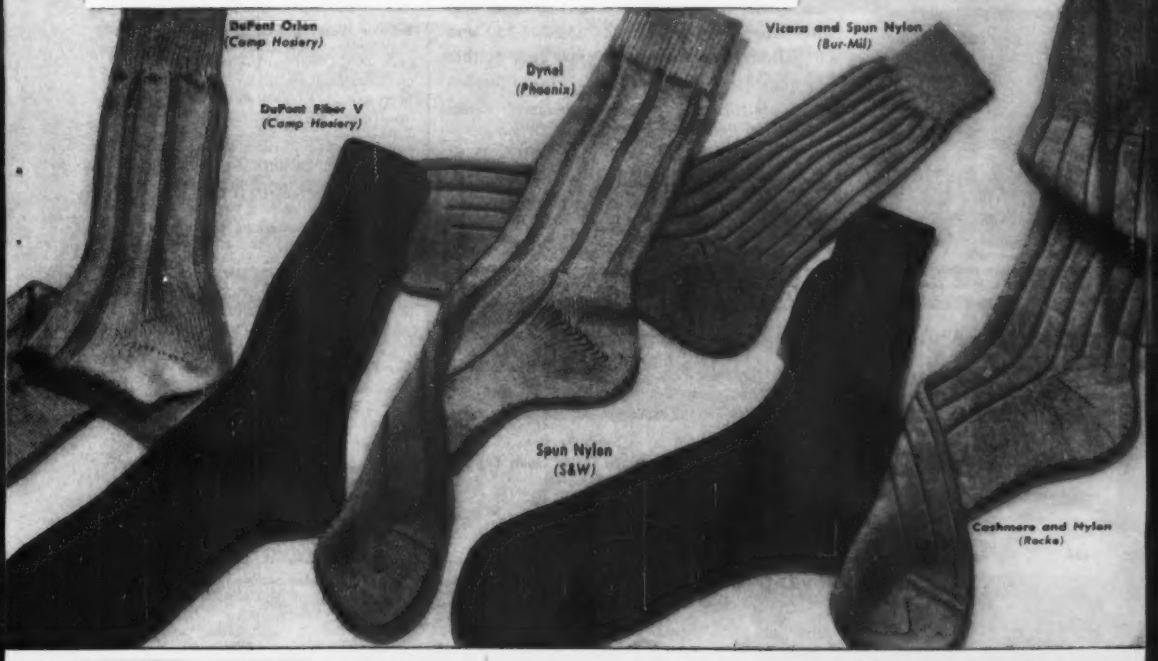
Established 1865

Sales Office: Empire State Building, New York 1, N. Y.

Divisional Offices: High Point, N. C., Reading, Pa., Chattanooga, Tenn.

MAIN OFFICE AND PLANTS: LACONIA, NEW HAMPSHIRE





Leading Mills use GLASCO

TANKS, PAILS, STORAGE CONTAINERS
and other accessory equipment.

Typical of a big line are:

STAINLESS STEEL STORAGE CONTAINERS

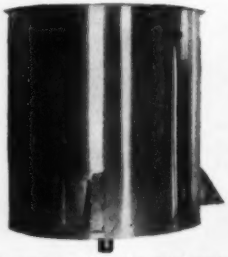
— 18 gauge, polished outside, top edge doubled metal flanged out ¼" at 90°. Has 2 stainless steel tubular handles. Foot is 12 gauge polished stainless steel either spot or tack welded to container and sealed with solder. Capacities: 10 gals. (14" x 16"), 15 gals. (16" x 18"), 20 gals. (18" x 19"), 25 gals. (20" x 20"), 35 gals. (21" x 24"), 50 gals. (22¾" x 30").

STAINLESS STEEL PAILS—

drawn in one piece (seamless), with bail handles, come with or without foot—unpolished, or polished inside, or outside,—or both. They run in capacities of 12, 16 or 20 quarts.

MIXING AND STORAGE TANKS

Come in four styles: flanged and dished bottom, flanged bottom—flat or pitched, disc bottom—flat or pitched, cone bottom. Capacities: 25-50-75-100-150-200-250 and 300 gallons. Two styles of pipe legs (either with floor flanges or adjustable sanitary feet)—or with platform lugs or removable stand. Tanks 25 thru 100 gallons are of 16 and 18 gauges—and from 150 through 300 gallons they are of 14 and 16 gauges (depending on style of bottom). Extras include: 1 piece flanged cover, hinged cover, and motor bracket.



Manufacturers of modern metal equipment for wet processing uses, including Dye Jig Enclosures, Dye Tubs and Becks, Wash Tubs, etc., of stainless steel and other metals that resist corrosion under most alkali and acid conditions.

GLASCO EQUIPMENT CORP.
Pioneer Fabricators of Stainless Steel Equipment
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GLASCO PRODUCTS

Massachusetts
Charles L. Niles Company, Boston

North Carolina
Odell Mill Supply, Greensboro

South Carolina
Greenville Textile Supply Co., Greenville

Useful Accessories (Continued)

a slow-speed screw conveyor 16 ft. long to deliver up to 500 b.h.p. of wood chips, hogged wood, sawdust, or coal. The conveyor is said to be easily adaptable to most boiler rooms and can be used in connection with the present stoker. Variable-speed screw drive and dual discharge are also available as extra attachments. (U-4)

Ticket and Label Marker

An improved automatic ticket and label marker has been developed by Soabar Co., 5815 Erdrick St., Philadelphia 24, Pa. The machine is designed to imprint more than 100 sizes of tickets, tags, and labels as needed in the plant, and can be set to print the exact number of tickets wanted. An attachment is available for automatic consecutive or duplicate numbering. A hand-set wheel is available for quick changing of data to be printed. The machine is suitable for imprinting variables such as part number, stock number, material, lot, date, and other details. (U-5)

Maintenance

Babbitt Seat Valve

A manual-control valve that features a babbitt seat has been announced by R-S Products Corp., 4600 Germantown Ave., Philadelphia 44, Pa. Heavy-duty valve No. 788 is equipped with totally enclosed gear-reduction drive, extended shaft, and floor stand. The sealing of water pressure is obtained through the use of a babbitted seat in the body. Monel or stainless steel is welded to the periphery of the valve disk. Such a metal-to-metal seat is said to give a satisfactory commercial shut-off in most installations. Remote, automatic, or semi-automatic controls are also available for this type of valve. (U-6)

Bronze Welding Rod

A new bronze welding rod featuring an extra-thin initial tinning action has been announced by Eutectic Welding Alloys Corp., 40-40 172 St., Flushing, New York, N. Y. EutecRod 148FC for dirty and old cast and malleable iron is claimed by the manufacturer to eliminate prewelding preparation required for conventional rods and is said to flow where directed without extensive chamfering. A specially developed flux coating on each rod is reported to yield full strength joints on old, corroded, and dirty cast iron. The rod can be used in chamfer joints as well as in square-butt and lap joints. (U-7)

Dry Fire Extinguisher

A 4-lb. dry-chemical fire extinguisher with a rubber hose has been introduced by Ansul Chemical Co., Marinette, Wis. The Ansul 4-B is said to offer these advantages: ease of operation, flexibility in fighting overhead and ground-level fires, and maximum extinguishing effectiveness for inexperienced operators. Discharge

Rayon Reports

Beware of Excess Resins, Caution Avisco Technicians

May act like "million razor blades" on fabrics

Reports from the field indicate that improper resination of fabrics to impart wrinkle-resistant properties is creating some dissatisfaction with the wearing qualities of certain rayon fabrics, according to Avisco's Converting Relations Department.

To cite two extreme examples, the department was recently asked to test a pair of pedal pushers which had lasted one day, and a pair of slacks which had worn through during a drive to Florida. Both garments were made of good fabrics. The fault was found to be improper application of resins, which had ended as deposits on the surface instead of impregnating the fibers. The result might be compared to the addition to the surface of a million little razor blades that sharply reduce resistance to abrasion.

Boardy Finishes

This situation is a recent development. It is felt that one of the major reasons is the demand for stiff, boardy finishes on the part of some cutters. The Stoll Wear Tester shows clearly what this type of finish can lead to. In one instance, one resinated fabric wore through after only 169 flex cycles, yet when properly finished that same fabric yielded more than 2,300 flex cycles. In another case the lining of a jacket broke down after only 63 flex cycles. The same fabric, properly finished, stood up under 903.

Correct Application

The minimum resin necessary to impart maximum wrinkle-resistance is all that should be used. Some fabrics require less than 7 per cent, others may need as much as 14 per cent. The right amount, correctly applied and cured, will lose little wrinkle-resistance in dry cleaning or the standard wash.

The pH and the temperature of the bath are of vital importance in applying resin finishes. Avisco has found that the pH should not be lower than 6.5 nor higher than 7. 90° F. is the maximum bath temperature recommended. Drying temperature should not exceed 280° F.

Converters and finishers who are not sure whether a particular rayon fabric has been properly resinated are invited to send a sample to Avisco's Converting Relations Department, which will be glad to test it, free of charge. Address: American Viscose Corporation, Converting Relations Department, 350 Fifth Avenue, New York 1, N. Y.

MAKE USE OF Avisco® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

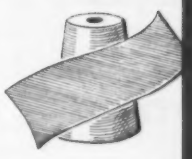
America's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

RAYON 20 YEARS AGO

New York, August, 1931—Rayon fabrics are used extensively in the decoration of the new liner, S. S. President Hoover.

New York, August, 1931—The newly introduced rayon warp bedspreads have been well received by the trade and are in active demand.



New York, August, 1931—"Dulest" is the name of the new dull lustre yarn produced by the Viscose Company.

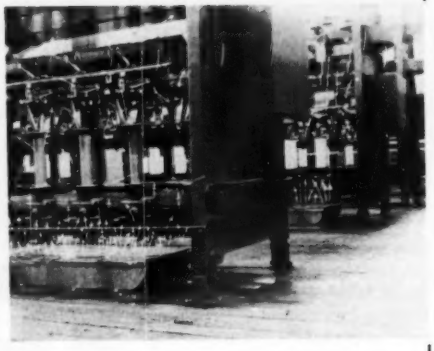
HIGH SPEED TWISTING FRAMES

Overheated?

Progressive Mills Are Overcoming This Problem With Air-Perme-Ator's Newest Development

The spinning room at left is humidity-conditioned, but operating without a humidification installation under the frames. Temperature 85°F., RH 50%. Temperature in frames 102°F., RH 20%. Results: Loss of strength and quality in yarn, weight losses, broken ends caused by static electricity.

The spinning room at right is equipped with an Air-Perme-Ator updraft installation under the frames. Temperature 76°F., RH 58%. Temperature in upper frames 79°F., RH 50%. Arrows indicate path of humid air. Results: Yarn weight losses avoided, static electricity eliminated, broken ends reduced, yarn quality and strength retained.



The constant heat generated by the speed of spindles causes an expansion of air which in turn prevents humid air, *even in a highly humidified room*, from entering between the frames.

Air-Perme-Ator counteracts this hot air attack by updrafting a sufficient amount of highly humid air under the frames (patent applied for) to absorb the heat load. In so doing, air expansion is sufficiently halted to allow the proper amount of humidity to be maintained.

Economical. Easily Installed.

There is an Air-Perme-Ator "dry humidification" system for every industrial need.

For further information write:

AIR-PERME-ATOR MFG. CO.

300 Preakness Ave. Paterson, N. J.

Useful Accessories (Continued)

time has been increased to give untrained personnel more time to extinguish the fire. Operating range of the extinguisher is 12 to 15 ft., and it has received a B2,C2 rating from Underwriters' Laboratories. (U-8)

Liquid Concrete Hardener

A new concrete hardener known as Flintcrust Liquid has been announced by Flexrock Co., Filbert and Cuthbert, West of 36th St., Philadelphia 4, Pa. The hardener is designed to convert a naked concrete floor into a superior type of concrete floor capable of long and maintenance-free service under oil, grease, discoloring, and disintegrating conditions as well as under heavy truck traffic. The liquid is easily applied by flushing without interrupting normal plant operation. (U-9)

New Penetrating Paint

A new penetrating and sealing, antirust paint that can be applied right over rusted surfaces has been announced by The Paint Corp. of America, Fidelity Bldg., Cleveland 14, Ohio. PCA-100 is said to be suitable for both interior and exterior use, and to be equally effective in preventing rust on new metal or stopping rust action on presently rusted metal. The manufacturer states that the paint penetrates through any rust layer into the base metal and seals the surface against further rusting. PCA-100 is furnished in black only for use as a finish coat with either brush or spray application. (U-10)

Salt-Tablet Dispenser

A new salt-tablet dispenser known as the GS Ace has been announced by General Scientific Equipment Co., 2700 W. Huntingdon St., Philadelphia 32, Pa. The dispenser is said to be strong, simple, and foolproof. It is made of 95% glass and plastic with a top capacity of 750 ten-grain salt tablets. Attached in a place near the drinking fountain, the contents are visible to the workers. Visibility is said to invite consumption and to reduce slow-downs caused by heat fatigue and loss of body salt resulting from excessive perspiration. (U-11)

Time Clock Cards

A multiple-use time card called the Multi-Time card has been announced by Pattison Lundal Co., 4303 Milwaukee Ave., Chicago 41, Ill. The card, supplied in sizes to fill all standard time clocks, consists of eight cards in one. Eight individual sheets are stapled and tabbed in a cardboard back. A strip of carbon is provided on the back of each sheet under the space where the employee's name and clock number appear. When this name and number is filled in on the top sheet, the information is duplicated on the seven sheets attached below. The top sheet is removed at the end of the first week's

SEE SUPREME'S SUPER-RIBBER ADVANTAGES

Through A Knitter-Mechanic's Eyes

★ **GIVES MULTI-MACHINE PRODUCTION WITHOUT "KNOCKING ITSELF OUT"**

Up to 56 Yards Per Hour from a *single* machine . . . Max. feeds per diameter inch means profit boosting production without machine-busting rpms. Less wear — less downtime — longer machine life.

★ **SIMPLER TO RUN AND MAINTAIN**

Flip-of-the-finger stitch adjustment . . . Open, easy-to-get-at knitting system . . . Individual, channeled cams —no chance of smash-ups . . . Direct, convenient, man-to-machine controls . . . Foolproof synchronization of dial to cylinder needles . . . Easier for new, inexperienced operators.

★ **HAS QUICKEST, EASIEST, SWITCHOVER FROM PLAIN TO SWISS RIB**

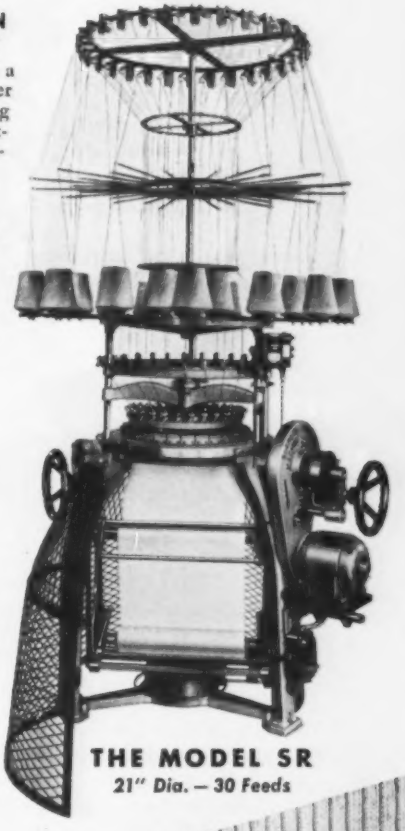
Exclusive, new method eliminates changing cams — gives immediate switch.

★ **KNITS "SUPER ELASTIC" QUALITY RIB CLOTH FROM PRACTICALLY ANY YARN**

Handles wide range and variety of yarns with minimum adjustments. Minimizes damages from weak or slubbed yarns. Uniform, high elasticity gives better size and shape retention. Dogless—no pinch lines.

★ **HAS SUPREME'S PROVEN-IN-THE-MILL FEATURES**

Sturdy, tripod construction . . . Trouble-free design and anti-wear engineering . . . Stationary Yarn Stand . . . Revolving, floating take-up and roll-up . . . Rugged, smooth-running unit motor drive. Patented multi-disc clutch . . . Starts easy . . . Stops fast.



THE MODEL SR

21" Dia. — 30 Feeds

The Supreme Model SR is available in a complete range of sizes from 7"— 10 feeds to 30"— 84 feeds. For further details, write for free folder.

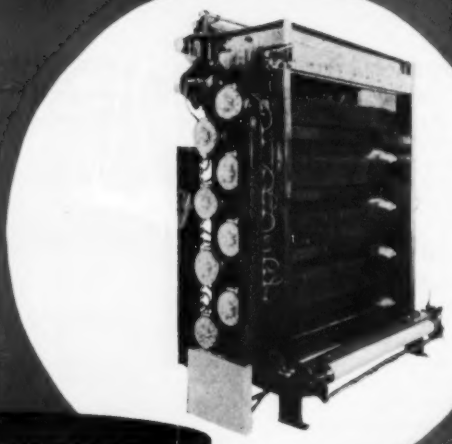
SUPREME

KNITTING MACHINE CO., INC.

107 JOHNSON AVE., BROOKLYN 6, NEW YORK, N. Y.

Southern Representative and Showroom:
The Mallack Co., 711 S. Tryon St., Charlotte, N. C.

METLKOR® BRUSHES PREFERRED



NEW HERMAS MOTORIZED BRUSH

"Most of our customers prefer METLKOR BRUSHES," states the Hermas Machine Co., well-known manufacturer of clothroom equipment, "because:

"—The cores never warp or get out of alignment . . .
"—Bristles don't fall out . . .
"—Rolls are balanced to prevent whipping.
"—All of which is conductive to long brush life and even brushing."

Hermas uses METLKORS in this new motorized brushing machine, as they have in other Hermas brushes, because of their superior performance.

The metal cores, of aluminum, cold drawn steel, stainless steel, copper, or bronze, cannot sag, split, or get out of alignment.

Bristle is wound on the cores by our patented refillable process, firmly held with flat metal wire, and sealed with special baked plastic cement.

*Reg. U. S. Pat. Off.

M. W. JENKINS' SONS, INC.
74 YEARS OF INDUSTRIAL BRUSH KNOW-HOW
Cedar Grove, Essex County, New Jersey

Useful Accessories (Continued)

work, and the sheet beneath is already filled out ready to start the new week. (U-12)

Equipment

Automatic Illumination

A simple illumination control of the plug-in type, claimed to be weatherproof and low in operating and maintenance costs, has been announced by Weston Electrical Instrument Corp., 641 Frelinghuysen Ave., Newark 5, N. J. The model-1089 unit is designed to provide automatic On-Off control of artificial lighting at predetermined light levels, and thereby eliminates human judgment and arbitrary time schedules. The unit is recommended for street lighting, sign lighting, industrial lighting, and other purposes. (U-13)

Double-Lens Magnifier

A 4-power, 2-in. magnifier with a double lens that is said to overcome all distortion has been announced by Henry Hildebrant & Associates, Box 228, Burlington, Wis. Called the Hofer & Logan magnifier, the device consists of an all-metal frame of 2½-in. diameter and ⅞-in. thickness. The frame houses two separate optically ground and polished 2-in. lenses that are scientifically mounted and so locked that they are dustproof. This press-locked mounting is said to provide great resistance to breakage. The unit is light and of vest-pocket size. (U-14)

Electronic Counters

A new general-purpose counter has been announced by General Control Co., Boston 34, Mass. The counters will be known as the Post Promatic Electronic Congress. The operation of this new counter may be either cumulative or predetermined, and it is capable of counting over 10,000 units per sec. The high-speed count is obtained through the use of photo-cell and electronic circuits. Miniature parts, as well as large bulky units, may be easily and accurately counted. A visual totalizer indicates the exact count, while a rate meter shows at all times the rate of count per hour. Operation is 115-v., 60-cycle. (U-15)

Industrial-Battery Charger

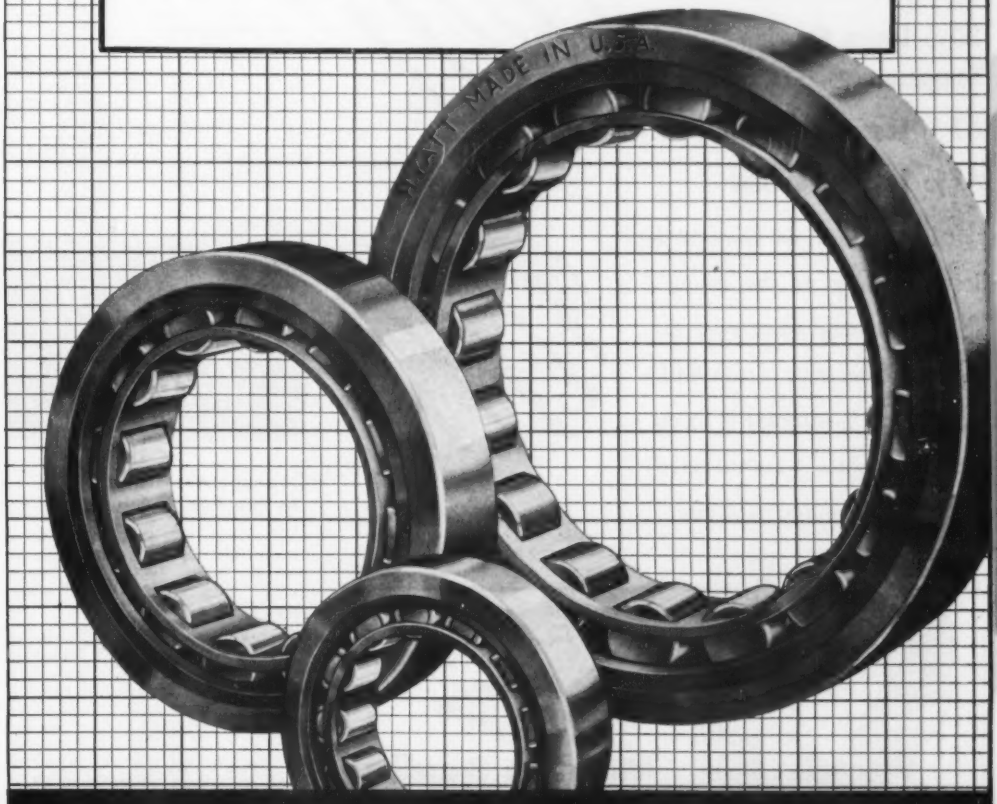
A new battery charger for industrial trucks has been announced by Yale & Towne Mfg. Co., Philadelphia Div., 11,000 Roosevelt Blvd., Philadelphia 15, Pa. The new charger is designed for units up to 55 amp.-hr. capacity and operates on the selenium-rectifier principle that gives simplified maintenance-free operation, prolongs battery life, and saves power. An automatic controller governs the amount and time of charge without the use of moving parts. There are said to be only three simple steps required in use: plug it in—set clocks—and throw a switch. The charger can be plugged into any standard 110- or 115-v., 60-cycle out-

There's a correctly designed HYATT *for each application*

When manufacturers of modern textile machinery "build in" Hyatt Roller Bearings, you can be sure that the bearings are ideally suited for the job.

With a correctly designed Hyatt for each application, the textile machine designers, working in close harmony with our experienced bearing engineers, make this assurance doubly sure.

Thus for easing shock loads, extending machine life, and helping to reduce operating costs Hyatts are the preferred textile bearing for new machines or changeovers. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.



HYATT ROLLER BEARINGS

 For more information, write direct or use Reader Service post card.

LEADING COTTON MILL FINDS

GAULIN-HOMOGENIZED SIZE

USES

...17% Less Starch

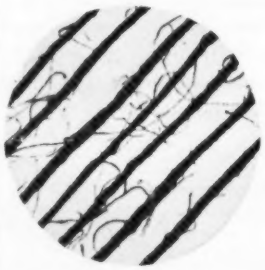
10% Less Softeners

20% Lower Cooking Temperatures

87% Less Cooking Time

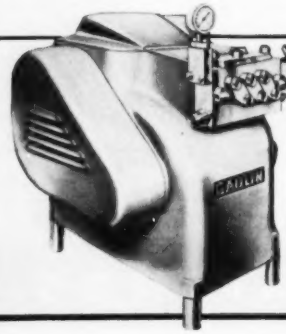
67% Less Cycle Time

"In addition, we have 50% less shedding at the loom," say the management of a famous Connecticut cotton mill, "plus 1 to 2% increase in loom efficiency, since we converted to Gaulin-Homogenized size."



Photomicrograph of 40's yarn coated with homogenized size. Note the exceptional degree of fibre lay.

Photomicrograph of 40's yarn with boiled size. Note the irregular degree of fibre lay.



Write for full facts on GAULIN guaranteed performance. Complete engineering service is yours without obligation.

Gaulin TRADE MARK

Manton Gaulin Manufacturing Company, Inc.

52 GARDEN STREET, EVERETT 49, MASS.

Useful Accessories (Continued)

let for use on either lead-acid or nickel-alkaline batteries. (U-16)

Ion-Exchange Unit

An ion-exchange unit for the treatment of water in steam-heating plants has been developed by The Permutit Co., 330 West 42nd St., New York 18, N. Y. The dual-bed Ion Exchanger is designed to eliminate the need for much elaborate equipment and for handling such dangerous chemicals as caustic soda and sulphuric and hydrochloric acids during the regeneration process. The unit's principal application is expected to be in industrial plants for the conditioning of boiler feed water, where the prevention of scale formation and the reduction of condensate return-line corrosion are major problems. (U-17)

New Mixing Device

Designed for processing operations where propellers are generally ineffective, the Simplex Dispersator has been developed by Premier Mill Corp., 218 Genesee St., Geneva, N. Y. The Dispersator is designed to be used for speedy emulsification, dispersion, and intimate mixing. It is claimed that tests have proved that the mixer achieves satisfactory results in a fraction of the time needed for other types of high-speed agitators or mixers. The machine is specially designed to produce maximum turbulence and contact among various products. (U-18)

Books of Interest

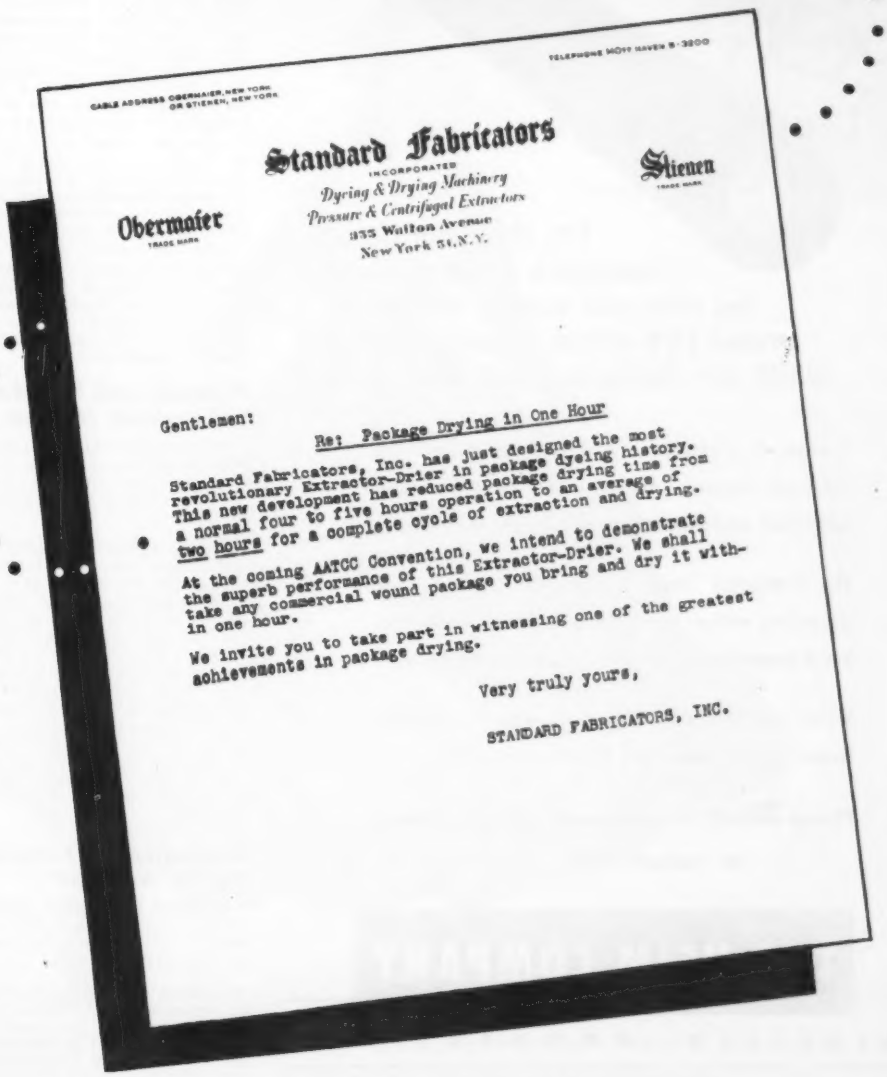
Convenient Manual On the Feeding of Help

EMPLOYEE FEEDING, A Manual of Policies and Operating Procedures, by John W. Stokes; Edmund S. Whitten, Inc., 216 Tremont St., Boston 16, Mass.; paper, 92 pages, $3.

Because of the growing consciousness of the importance of employee feeding in industrial plants, a need has arisen for a manual of policies and possible operating procedures in this rapidly developing field. The author, with many years of practical experience both in industrial engineering and food management, and in writing about them, appears to be thoroughly familiar with the subject. Emphasis is on "advance planning."

The book will serve well as a guide on the setting up and maintaining of employee food services, whether operated by

An open letter to package dyers



TELEPHONE MOTT HAVEN 9-3800

CABLE ADDRESS OBERMAIER, NEW YORK
OR STIENEN, NEW YORK

Standard Fabricators
INCORPORATED
Dyeing & Drying Machinery
Pressure & Centrifugal Extractors
875 Walton Avenue
New York 51, N.Y.

Obermaier
TRADE MARK

Stienen
TRADE MARK

Gentlemen:

Re: Package Drying in One Hour

Standard Fabricators, Inc. has just designed the most revolutionary Extractor-Drier in package dyeing history. This new development has reduced package drying time from a normal four to five hours operation to an average of two hours for a complete cycle of extraction and drying.

At the coming AATCC Convention, we intend to demonstrate the superb performance of this Extractor-Drier. We shall take any commercial wound package you bring and dry it within one hour.

We invite you to take part in witnessing one of the greatest achievements in package drying.

Very truly yours,

STANDARD FABRICATORS, INC.

Yes, the Heim Unibal Sweepstick is not only saving time and money, but has improved pick action on every loom on which the change-over has been made.

Instead of an elongated stud hole, this Heim Unibal Spherical Bearing delivers long-wearing, smooth operation, and corrects any misalignment at the stud.

The sweepstick body is made of resilient, shock absorbing, rubber bonded fabric. The spherical bearing is assembled as an integral part of the body.

When you replace worn-out sweepsticks, switch to Heim Unibal Sweepsticks for economy's sake.

Please *Write* for prices and descriptive circular on various sizes . . . . .

THE HEIM COMPANY

FAIRFIELD, CONNECTICUT

Books of Interest (Continued)

plant management or outside contractors. It also is detailed enough (with charts, graphs, and lists) to serve as a manual of basic operating practices for those who may take a food-service job over from scratch and want to find out what the subject is all about. Typical chapter heads, for example, are "Location, Layout, and Equipment," "Purchasing, Receiving, and Storage," "Sanitation," "Food Cost Control," "Food Trucks and Other Services," and "Developing Patronage and Sales Volume."

Record of Growth Of a Textile School

THE SCHOOL OF TEXTILES, N. C. STATE COLLEGE, Its Past and Present, by T. R. Hart; N. C. State College Print Shop, Raleigh, N. C.; cloth, 230 pages, $5.

Prof. Hart, Director of Instruction at N. C. State College, School of Textiles, has compiled a pleasing array of factual material on the school and "the boys" that have been for so many years a part of his life. Divided into nine chapters, the book ranges from a description of the early efforts to establish textile education in North Carolina to an alphabetical listing of alumni and their positions in the textile industry. In between are given the organization of the school, a listing and background description of the faculty, the facilities of each department, names of graduates arranged by classes, and brief summaries of the textile courses now available to textile students.

Principles and Procedures In Timestudy Methods

TIMESTUDY FUNDAMENTALS FOR FOREMEN, Second Edition, by Phil Carroll; McGraw-Hill Book Co., 330 West 42nd St., New York 18; cloth, 209 pages, $3.

Simple straightforward language is used in this manual designed for foremen who want to have the essentials of timestudy handy for reference purposes. The author describes quickly the basic principles of timestudy, points out the performance improvements that timestudies give, gives the step-by-step procedures, and tells in everyday language how loads are arrived at and how they can be put across to the employee. This second edition includes latest thinking on the subject since 1944, including more charts and "human" illustrations that help boil the subject down to a level from which practical action can be taken.

Information on Materials Handily Arranged

MATERIALS HANDBOOK, Revised 7th Edition, by George S. Brady; McGraw-Hill Book Co., 330 West 42nd St., New York 18; cloth, 913 pages, $8.50.

Purchasing agents, engineers, executives, and superintendents will find this practical handbook handy. It gives specific background data, arranged alphabetically and also indexed, on about 9,000 materials. If

Where quality

is the

first consideration

in a fabric

there is

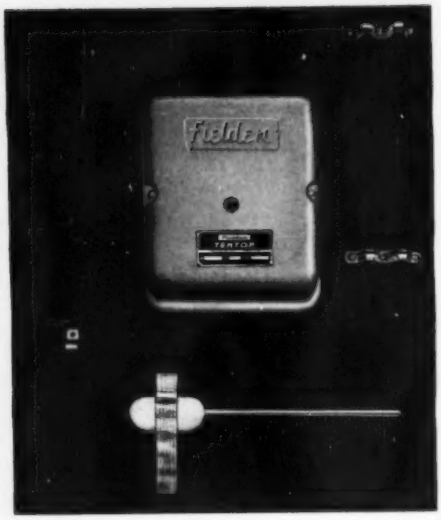
no substitute for

*Celanese**

Acetate Rayon Yarn

*Reg. U.S. Pat. Off.

CELANESE CORPORATION OF AMERICA, 180 MADISON AVENUE, NEW YORK 16, N. Y.



FOR ACCURATE LEVEL CONTROL

of liquids in textile processing many mills use

FIELDEN TEKTOR LEVEL SWITCHES

—compact devices operating without floats, diaphragms, or moving mechanical parts to get out of order.

By means of an electrode, set in a dye vat, size box, or other container, any falling of the surface of a liquid or solid below a pre-determined level is immediately shown by a pilot light. For automatic or semi-automatic control of the surface level, operating relays with snap action switches provide control circuits for operating alarms, valves, pumps, etc.

Combined high and low level indication and control also available. A level differential from 1/32" upwards may be maintained at will.

TEKTOR is housed in a dust proof and splash proof cast aluminum box which may be placed at any convenient point and connected by cable to the electrode.

Write for full technical details of the TEKTOR for your level control purposes.

Also Available—

—our ARC-1 automatic moisture control for dryers and slashers. Write for full particulars.

PRICES from $85

ELECTRODES FROM $5

Fielden INSTRUMENT CORPORATION

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145 Normand St., Montreal

2920 NORTH 4TH STREET
PHILADELPHIA 33, PA.

Books of Interest (Continued)

a mill has a specific problem in metals, abrasives, or wood bothering it, for example, the person responsible for a decision on the subject can in this "encyclopaedia" look up the chief characteristics, comparative data, sources, substitutes, and uses of the material causing the headache. Included also are patented and trade-named materials that broaden the coverage of commercial-application information.

Fabric Designing In How-To Form

TEXTILE DESIGN, 2nd Edition, by Antony Hunt; Thomas Y. Crowell Co., 432 Fourth Ave., New York 16; cloth, 96 pages, $4.50.

This well-illustrated how-to book deals primarily with the designing of home-furnishing fabrics, and how designs are built into fabrics. As such, it will be of interest to those numerically few but influencially important persons in our industry who have a finger in the designing of fabrics. To the artist or fabric creator who never goes inside a mill, for example, this book will serve as a guide and incentive.

Questions AND Answers

How To Increase Production In Peroxide Bleaching

Technical Editor:

Can we increase production in the peroxide-bleaching process? (9452)

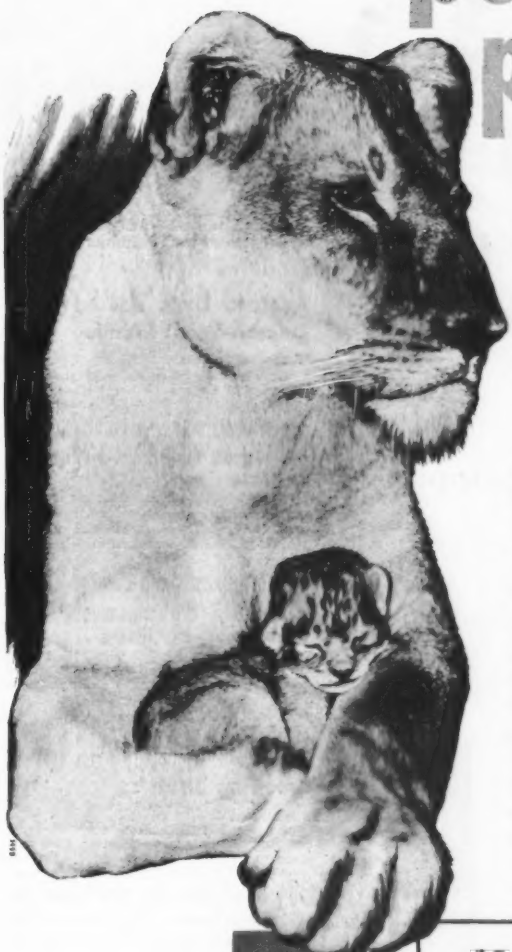
Yes. Let's take just one example and indicate a program that will greatly increase the productive capacity of limited equipment. Similar techniques could easily be worked out for nearly any type of stock.

Bleaching worsted top in an Abbott kettle can take several hours by the orthodox procedure of keeping the stock in the kettle until bleaching is complete. A short-cut method that produces perfect results is running the stock in the regular-strength bleach liquor for about 15 min. until it becomes thoroughly and uniformly saturated. Then the spools of worsted top are lifted out of the bleaching liquor and piled onto a truck to stand for 8 to 10 hr.

The spools should be covered with a piece of clean, white "leader" cloth that has been soaked in the bleaching solution. Every hour or two it is ad-

For The Carpet and Wool Industry

positive protection



DILEINE CONC.

Effective Protection of Acetate Fibers Against Atmospheric Fading

Dileine Conc. has been developed to meet processing problems encountered in the dyeing of coarse cellulose acetate fibers and yarns for the carpet and wool industry.

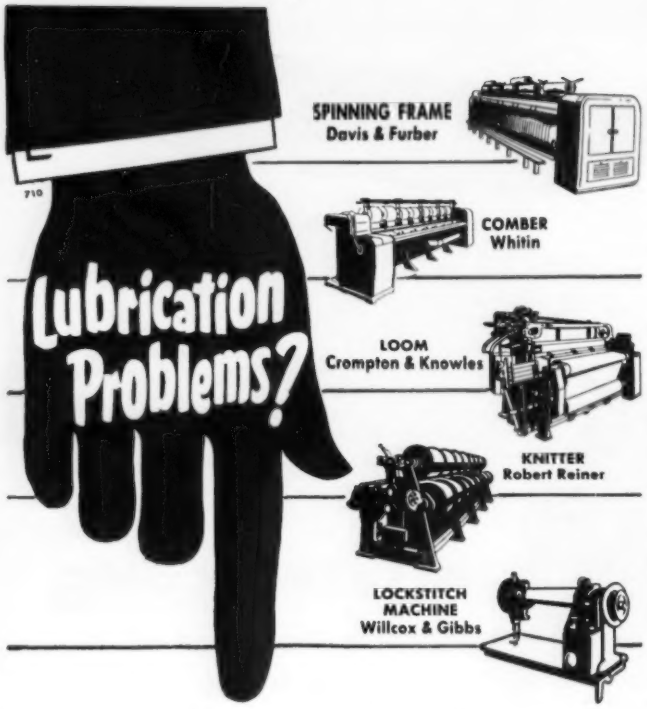
A proper selection of acetate dyestuffs along with Dileine Conc. will result in dyeings that are highly resistant to atmospheric fading and sunlight. The slow exhausting properties of Dileine Conc. assures even distribution throughout the raw stock or heavy denier skeins.

Because of its stability to heat and slow exhausting properties, the use of Dileine Conc. requires no pre-treatment on conventional pressure dyeing equipment of acetate fibers ranging from 3 to 20 denier. This inhibitor has been used successfully for the dyeing of raw stock from a standing bath at high temperatures in a Hussong raw stock dyeing machine.

Dileine Conc. offers positive protection against atmospheric fading. Dileine Conc. assures rapid processing by even distribution throughout the material without sacrificing light fastness. Should you be interested, our technical service department would welcome the opportunity of submitting samples . . . custom-formulated . . . to meet your individual problems.

JACQUES WOLF & CO. 50th Anniversary
Chemicals PASSAIC, N. J.

Passaic, New Jersey Branches: Carlstadt, N. J. • Los Angeles, Calif.



not on these machines!

...they're all BIJUR equipped

Each maker of these machines had your best interest in mind when he built-in a Bijur lubricating system. Human carelessness and forgetfulness are eliminated by machines having built-in Bijur lubricating systems. These machines will never be shut down because they lack continous, proper lubrication. Make certain the machine you buy is furnished with a Bijur lubricating system.

Write for Bulletin 6A

BIJUR

LUBRICATING CORPORATION

Rochelle Park • New Jersey

Questions and Answers

(Continued)

visable to pour a pail of bleaching liquor, from the kettle in which the stock was treated, over the leader and the goods on the truck to prevent any parts from drying out.

After the bleaching cycle (8 to 10 hr. standing wet on the truck), the spools of bleached slubbing are put back into a kettle and rinsed with cold water for 15 min. Then 2% Acetic Acid 28% (on the weight of the wool) is added to the bath to neutralize any remaining alkalinity. The bath is run for 5 min. and then dropped, and the goods are extracted and dried in the usual manner.

During the time that a load or several successive loads bleach on the trucks, the kettle or kettles may be used repeatedly for saturating several batches instead of being tied up by goods standing and soaking for several hours. The usual titrations, tests, and replenishments of bleaching chemicals must be made before each new batch of wool is immersed.

Acetate Dyes Used for Dacron-Wool Blends

Technical Editor:

How can we piece-dye solid shades on mixtures of Dacron (Fiber V) and wool? (9453)

Use acetate dyeing colors to cover the Dacron and direct-dyeing wool dyes for the wool.

The acetate dyes should be dispersed with some suitable dispersant, and the wool colors should be dissolved in boiling water in another container.

The dispersed and dissolved colors are added in the same manner as in regular wool piece dyeing. The bath is brought up to the boil in about one hour and boiled for an hour or to shade. 10% Glauber's salt may be used as a dye assistant.

What To Do About Creeping Shuttles

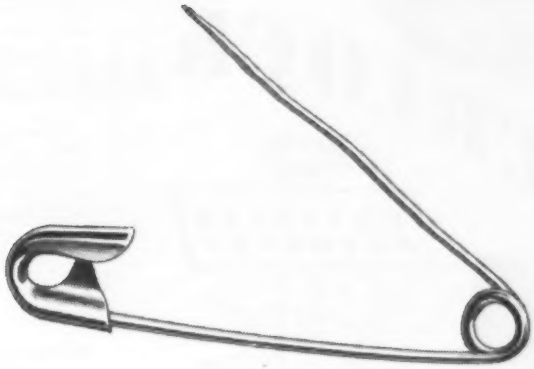
Technical Editor:

We are having trouble with shuttles creeping out of a two-cell box. Can you suggest a remedy?

We have C & K 2x1 dobbies running 110 picks of each color. Our binders are covered with leather. The shuttle at rest moves out and bangs on the first pick of the single box. (9447)

An inactive shuttle creeping out of the shuttle box has always been a problem when fabrics of this type are being woven.

There are a number of methods used to help this condition. Adjust



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Kreelon* is stable, in acids . . . in alkalies . . . in electrolytes . . . or in hard water. That's why you can use it in practically any textile wet processing.

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The Mellor Bromley range of top-line machines covers most classes of underwear and outerwear fabrics and garments. Send for illustrated leaflets of the types in which you are interested.

Here are five of the principal plants of the Mellor Bromley group in England, employing some 3,000 workpeople—many with 25, 40 and 50 years service.

MELLOR BROMLEY & CO. LTD
LEICESTER · ENGLAND

Questions and Answers

(Continued)

the pick on the opposite side so that there is only sufficient power to box the shuttle and no possibility of the shuttle rebounding out of the box. Use a soft bumper made of rolled-up cloth with only one piece of leather behind the picker to stop the shuttle with a shock-absorbing action. Adjust this bumper so that the shuttle does not enter the box too far and is pushed out by the box guide when the box changes.

Binders should be covered with soft leather and kept free from oil. The binders should also be shaped so that there is a binding surface for almost the full length of the shuttle.

Binder-spring tension is also important. Check the friction of the binder to the shuttle and the spring pressure of the binder on the shuttle.

Ninons Handled in Open-Width Form

Technical Editor:

How are ninons dyed? Is an antislip agent commonly used? (9451)

It is our understanding that most finishers prefer to handle fabrics such as ninons in open width because of the difficulty in removing crease marks and wrinkles once they are formed. The cloth may be dyed by any conventional method of piece-goods dyeing, such as continuous machine, pad jig, or straight jig.

Care must be exercised to prevent bruising the fabric or distorting the yarns from their normal position.

Synthetic resins and antislip agents such as colloidal silica, etc., may be used in finishing. These agents bind the threads in their normal position and emphasize the crispness and other properties of the fabric.

Resin-Bonded Pigments Can Be Screen-Printed

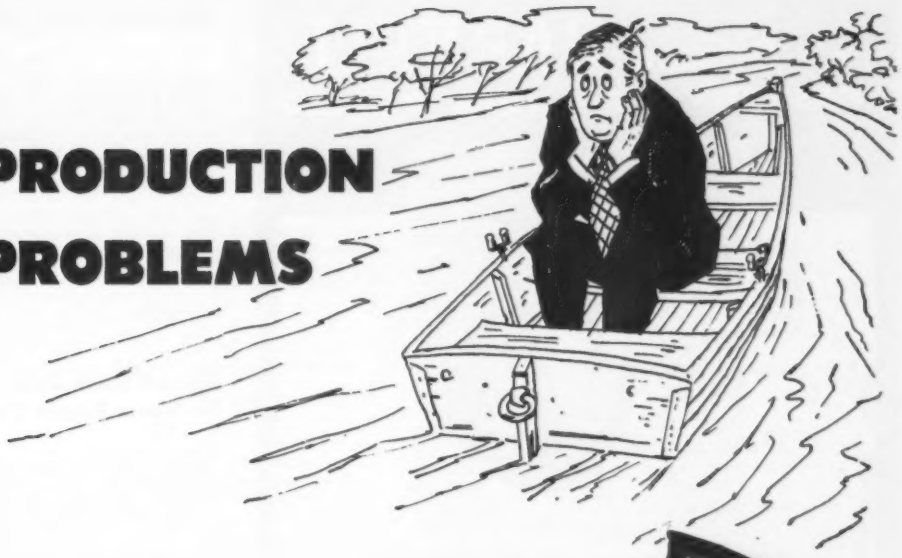
Technical Editor:

For many years I have screen-printed terry-cloth towels in Aridye. I have heard of a process by which I could print my towels with vat dyes, air dry, and then develop the color by hand ironing.

Can you tell me how to formulate the necessary dyes so that I can use this new vat-printing process? (9449)

We have been unable to find anyone who is printing vat colors by the procedure stated.

In the cases where we could obtain information, the screen-printing with vat colors is done by the usual procedure of printing, aging, oxidizing, and washing. It is true that resin-



PRODUCTION PROBLEMS

got you up a creek?

● The function of our Technical Sales Department is to help solve various production problems in the field. These men are constantly working with new products and techniques — perhaps this experience would be helpful in smoothing out production sore spots in your operation.

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Questions and Answers

(Continued)

bonded pigment colors can be printed by the method outlined: that is, print with the pigment emulsion, dry, and set the resin by hand ironing.

Transfers are also available for screen-printing. In the case of the transfers, put the paper transfer on the cloth and iron with a hot iron. This method accomplishes the transfer and at the same time fixes the color on the cloth. Transfer prints, as well as resin-bonded pigment prints, have excellent fastness, and are equal to vat colors in practically all cases.

Discard Some Yarn
To Insure Proper Twist

Technical Editor:

How can twist be prevented from unraveling in staple-fiber yarns? (9450)

With both filling and warp twist the loss in turns during transportation and handling is minor, particularly if the ends are properly secured to the spinning tube. Nevertheless, operators should discard from 10 to 12 in. before knots are tied to insure that only full-twist yarn goes onto the cone.

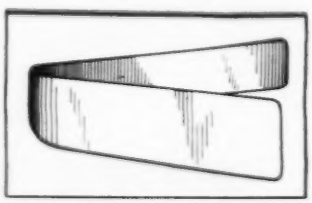
With higher-than-normal twist, as applied to spun-rayon crepes, a setting operation on yarn conditioners helps to check the tendency to unravel. Still it remains advisable to discard enough length at the beginning and end of each package so that only yarn with full twist goes into the fabric.

Rolled-Selvage Clips
Made From Cotton Ties

Technical Editor:

We see references to clips used in finishing goods that have a tendency to curl. What kind of clips are they, and how are they used? (9409)

All finishing plants make these clips themselves out of cotton-bale ties. About a 6-in. length of tie is cut and



SELVAGE CLIPS are made by finishing plants from cotton ties cut in 6-in. lengths. The doubled-over clip shown here must be hammered flat before it can be used as a spring clip to hold a rolled selvage straight.

A new electric hygrometer to be released for industrial use next year will control humidity down to a fraction of 1 per cent.

--Textile Industries

A 1951 revision of "Specification Requirements for Quartermaster Textiles" is available from the government printing office.

--U.S.Gov't Bulletin

As long as fibers remain in short supply and at high prices, durable finishes will more and more replace the ephemeral type which add nothing to serviceability but merely ease the task of selling.

--Daily News Record

A pneumatic shuttle-less loom with a speed double that of a conventional loom is said to have been successfully developed in Sweden.

--Textile World

Approximately 1/3 of the dry-cleaning claims reaching the National Institute of Cleaning and Dyeing for analysis involve loss or alteration of finish or color.

--Daily News Record

The new James Hunter compartment type soaper or washer increased productive efficiency in a mill by 100 per cent, with a wide variety of fabrics being processed at speeds from 80 to 125 yards per minute.

--James Hunter Machine Co. (Advt.)

A new loom attachment enables cotton fabric to be so closely woven that water cannot penetrate the untreated material.

--Textile World

Ultrasonic vibrators have successfully modified wool so as to reduce the tendency to felt and thus to shrink when washed.

--Textile Mercury & Argus

Designs for woven fabrics can be worked out on the loom, using a plain undyed warp, lifting the ends according to the pattern desired and staining them in the required colors.

--Textile Industries

Higher temperatures permit dyeing of many new synthetics which have a relatively poor affinity for dyestuffs at 200 degrees F.

--Daily News Record

The future loom design should be based on "an extreme exploitation of standardization" in order to bring costs down.

--Proceedings of Textile Institute, Brighton, England

The Textile Quality Control Association has been formed by a group of 85 technical men in Raleigh, N. C.

--Textile World

Top management in Federated Department Stores predicts a "reasonably good" fall volume of business, with dollar sales up slightly.

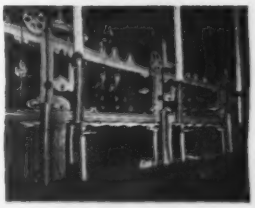
--Daily News Record

A survey shows that 80 per cent of all sales are made after the fifth call... These sales are made by the 10 per cent of salesmen who do not quit after the second, third and fourth calls.

--Nat'l Sales Executives Digest

"The Army is seeking a fabric which keeps the outside moisture out, but allows bodily vapor to escape. Considerable work has been done...but the desired result has not yet been found."

--Quartermaster General, U.S. Army



News from the field

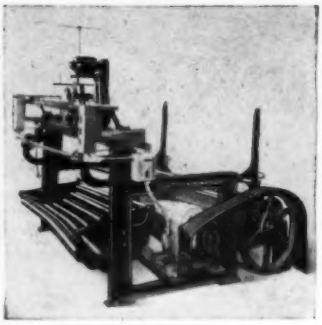
The Hunter Open-Width Continuous Washer offers new profit and production possibilities — with speeds from 80 to 125 yds. per minute, depending on the fabric! One mill improved production 100%! Further savings may be made through its accessible design, fast change-over and low maintenance costs. The Hunter Field Engineer, nearest you, will be pleased to give details.

JAMES HUNTER MACHINE CO.
FOUNDED 1847 North Adams, Mass.

PREPARATION AND WET FINISHING EQUIPMENT FOR WOOL, WORSTED & SYNTHETICS

No. 55
RAILWAY
SEWING
and
ROLLING
MACHINE

Motor Driven Completely



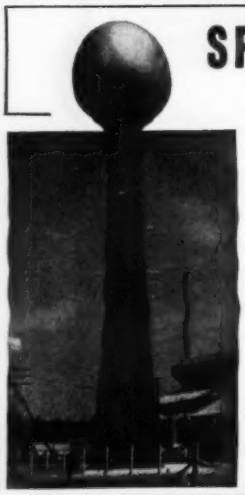
The cloth from the loom bolt is placed in the cradle in front, and the ends are stitched together as fast as the goods are unrolled from the loom bolt, and as many pieces as desired are rolled up in a large roll ready for the next machine.

This newer model has several improvements over the older style No. 25 and No. 55 machines. The rolling-up rolls run in ball bearings, and are connected by roller chain. The front roll is driven from a brake motor by V belts.

The new pattern main frame permits putting the motor inside out of the way.

Write for our new, fully illustrated catalog of Cotton Machinery No. 7-51.

Curtis & Marble
MACHINE COMPANY
WORCESTER, MASSACHUSETTS



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R. D. COLE MFG. CO.
NEWNAN, GA. Established 1854

TANKS TOWERS CYLINDERS VESSELS

Questions and Answers

(Continued)

doubled over in the middle so that you have a double length 3 in. long. This piece is then hammered flat.

If a curled selvage or doubled edge occurs in the cloth at any step of processing, the operator opens the clip with his finger and slips it over the selvage of the cloth. When he releases the clip, it springs back shut over the cloth edge. The clip remains flat and can pass through squeeze rolls without damaging them.

After the goods have been processed through the machine or range where trouble with curling or doubling is encountered, the clips are removed.

Several precautions are necessary when the clips are being made.

First, the piece of bent tie must be hammered flat. There must be no raised edge that might damage the squeeze rolls.

Second, the cut ends of the piece of cotton tie should be beveled off smooth and the corners rounded. A sharp or jagged edge or corner might cause injury to the operator and might damage the squeeze rolls.

Mill Maintenance

New Pipe Recommended To Conserve Alloys

Schedule 5 stainless-steel pipe is a light-walled pipe that is being recommended for many uses because nickel and other alloys are in short supply. It is approved by the Correlating Committee of American Standards Assn. and is made from the standard stainless analyses set up by American Iron and Steel Institute.

It has satisfactory strength for most applications in industry, and it will provide an excellent margin of safety with working pressures up to 150 psi. In the smaller diameters, below 2 in. o.d., working pressures can be considerably higher.

Comparison of the wall thickness of Schedule 5 with Schedules 40 or 10 stainless pipe shows that Schedule 5 gives a considerably larger inside diameter than the other two and, as a result, has a larger internal cross-sectional area. The outside diameters of the three pipes are identical, which means that you can use Schedule 5 with ex-

For FINEST GAUGES and PRECISION KNITTING

you can depend on the

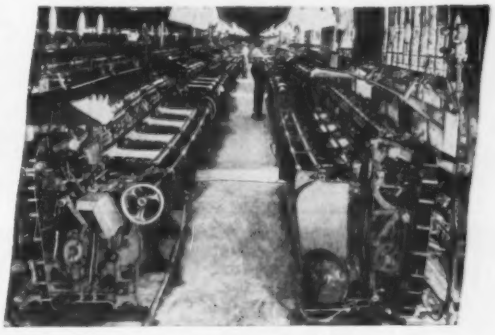
REINER

four section, full fashioned TWIN KNITTER (up to 66 gauges)

Whether you require 25 dozen or 2,500 dozen additional weekly production, you can get top hosiery production of clear fabrics and stitch formation with one unit or a battery of these super-efficient machines. This statement is based on close observation of Reiner Twin Knitters installed by many outstanding manufacturers and their reports on finest gauge production obtained.

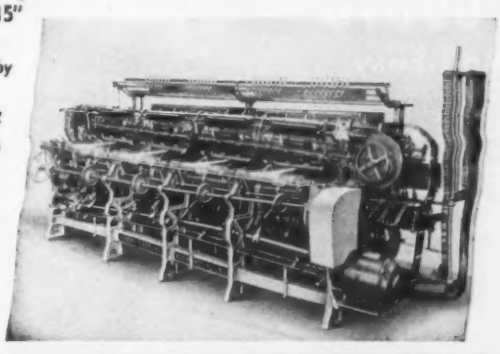
Automatic operation of the Reiner Twin Knitter assures minimum handling by the operator and adaptability to any operating system.

Users report top production, up to the finest gauges, without the necessity of costly air conditioning, and stress economy of operation and maintenance.



Some of its features: Lace (Perforating) Attachments—Fancy Heel Attachments—Colored Heel Attachments—Ringless Attachments—Plating Attachments—Loopless Toes—Non-Run—15" Needle Bar.

Machines are delivered fully assembled, thereby avoiding erection delays and hazards.



The Reiner Line Includes: Tricot Machines (2 and 3 bar, 84" and 168")—Simplex (Double *Knit) Machines — Raschel Machines — Kay-loom Machines—Full Width and Sectional Warpers—All types of Creels—Automatic* Schiffli Embroidery Machines (10 and 15 yards) — Bobbin Winding Machines (for Stitching and Quilting) — Ready Spare *Part Service for all Reiner Machines.*

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ROBERT REINER INC.

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10 MINUTES FROM TIMES SQUARE. Take Bus Nos. 61 or 67, from Platform No. 60, Port Authority Bus Terminal, 41st Street and 8th Avenue, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left and walk through the underpass up to Gregory Avenue . . . TELEPHONE UNION 7-0502, 0503, 0504, and 0505. From New York City call LONGACRE 4-6882

TO CHECK RELATIVE HUMIDITY REMEMBER

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Model 185 Hygrodial Precision Humidity and Temperature Indicator

Hair-operated and calibrated to professional standards of accuracy by the maker of the world's finest weather instruments. Handsome, modern case—4" high, 5½" wide, 1⅝" deep.

Model HA/2
Hand Aspirated Psychrometer

Accurate readings obtainable without special skill. Psychrometric readings can be taken at any point desired however inaccessible.

Model 160
Portable Humidity and Temperature Recorder

3" x 5" charts, 10 or 30 hour records. Modern design...handy for small space and difficult locations ...built to meet unusual conditions.

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Hygrothermograph

The foremost relative humidity recorder for laboratory, factory, and office use. Scientifically designed for accuracy and dependability.

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Motor Aspirated Psychrometer

Designed to determine wet and dry bulb temperature with laboratory accuracy—Motors supplied for use on 115 V., 50 cycles or 60 cycles.

Model S/1
Pocket Sling Psychrometer

A small, low cost instrument. Thermometers graduated in 1° increments from +35° F to +110° F. Furnished complete with case and psychometric slide rule.

Model 550
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Manufactured to U. S. Weather bureau specifications. Thermometers graduated in 1° increments from −20° F to +120° F. or −35° C to +49° C.

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Cut Your Materials-Handling COSTS with Roll-Easy

Colson Casters

Model 3-408-16 caster with thread guards, designed especially for the needs of the Textile Industry.

Rolling stock that doesn't roll easily cuts efficiency and profits in your mill. Colson *specializes* in wheels and casters engineered for the Textile Industry. They roll easily over all floors, are rust-resistant—many models have thread guards. Colson also manufactures a wide range of trucks for the Textile Industry—hand trucks, platform trucks, box trucks, drum and barrel trucks and special devices. Write us or consult your phone book for the Colson representative near you.

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CASTERS • • LIFT JACK SYSTEMS • • INDUSTRIAL TRUCKS

Mill Maintenance

(Continued)

isting installations of Schedule 40 or 10 pipe.

When compared with heavier pipe, such as Schedule 40, this new pipe schedule gives two or three times the pipe footage per pound of stainless steel. Thus, in addition to conserving critical materials, Schedule 5 gives outstanding savings in cost of pipe.

You can get more detailed technical information from various steel producers. Alloy Tube Div., The Carpenter Steel Co., Union, N. J., has announced that it will furnish you a set of data sheets that give pertinent information about Schedule 5.

Air-Conditioning Principles

(Continued from page 141)

confidence in a coat of paint acting as a vapor barrier.

No vapor seals should be placed between the insulation and the cold-aid side, so that if any vapor does get into the insulation it can be passed on through the wall to the low-pressure outside.

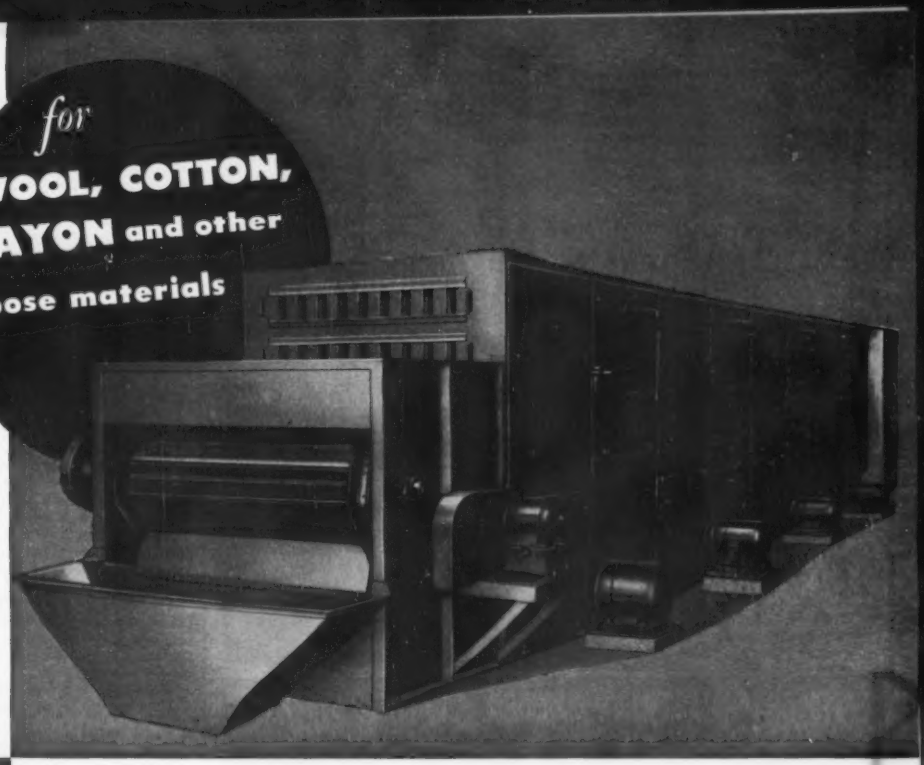
Wall Ties

Since most mill window openings are fairly large in area, it is necessary to build them strong enough structurally to withstand vibration, temperature stress, and so forth. A core wall made up of two 4-in. brick walls with the insulating core between them is not well made without wall ties between the two sections.

Wall ties, being metallic, will cause thermal short circuits through the insulation unless some low-conductivity material is used. If possible, it is better to use two 8-in. walls without wall ties. Cinder blocks in many areas are an economical substitute for brick in providing a total of 16 in. of masonry. Wall ties through the insulating core should be avoided whenever possible.

The main objection to core-wall construction is the necessity of wall ties if thin masonry walls are contemplated. On the other hand, if the insulation is applied to the inside wall surface of a solid 8-in. wall, it becomes necessary to plaster-coat the insulation, an expensive process. Also, rigid forms of insulation are usually more expensive to buy, and their application costs more than pouring loose or granular insulation into a core. In most cases, it is cheaper to build two 8-in. walls with loose insulation poured into the core than one 8-in.

for
WOOL, COTTON, RAYON and other loose materials



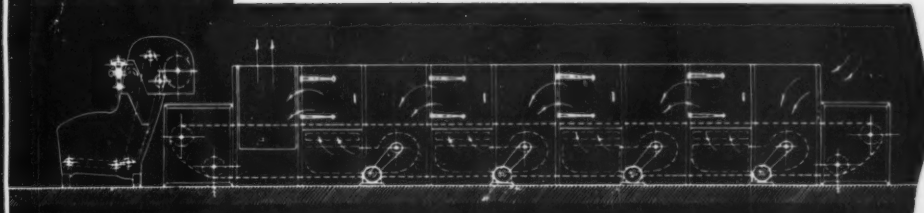
SARGENT'S *CONTRA-FLOW* Single Apron Dryer

Sargent presents a NEW, fast, automatic, single apron dryer employing the counter-air-flow heating principle. This system provides the most rapid and economical textile drying ever developed for wool, cotton, rayon and other synthetic and loose materials.

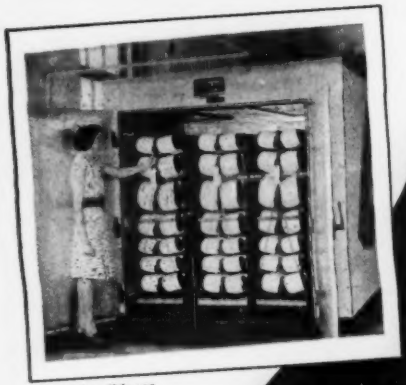
The material to be dried and the air which dries it *enter* the dryer at *opposite ends*, and *travel* through in *opposite directions*. The fresh air enters the dryer at room temperature at the delivery end. Passing upward then downward through the material, the air is constantly reheated and gains in temperature and moisture content as it travels toward the feed end. Wet material traveling through the dryer is subjected first to hot, wet air, then progressively to drier, cooler air. In the final stage, cool room temperature air passes through the hot, dry material and is thus delivered from the dryer in perfect condition and *without carrying away heat.* For complete information please write for Bulletin No. 185.

C. G. SARGENT'S SONS CORPORATION

Graniteville, Massachusetts, U. S. A.



Schematic diagram of the SARGENT CONTRA-FLOW SINGLE APRON DRYER showing direction of travel of air through fans and heating elements. Material travels in opposite direction.



"H-W" Conditioner for Nylon Yarn handled on trucks.

"H-W"®
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meets the enthusiastic approval of mill operators and executives wherever they are in use. More than one thousand installations are proving their operating and economy advantages: turning out better and always uniform yarn, preventing yarn spoilage, eliminating stoppage due to wild, snarling and kinking filling yarn, and effecting other important economies.

WRITE FOR BULLETIN UC

THE INDUSTRIAL DRYER CORPORATION
STAMFORD, CONNECTICUT.

Sterling
Ring Travelers

STEEL-BRONZE

Both are critical metals allotted to us in wire form for making Ring Travelers.

Keep a close check on your requirements, as inventory restrictions will not only limit our stock of finished Travelers, but will slow up production and add to our costs.

M. H. Cranford	Box 204	Chester, S. C.
D. R. Ivester	Box 882	Clarkesville, Ga.
T. B. Farmer	Box 150	Langley, S. C.
J. S. Furtado	Box 803	Fall River, Mass.

STERLING RING TRAVELER CO.
FALL RIVER, MASS.

wall with rigid insulation on the interior surface and plastered.

Finally, regarding windows, bricking them in may involve a rather expensive initial cost, but in most cases this cost is offset by the savings realized in the size unit necessary to provide conditioning. Also the production savings realized in operating a room without irregularities in temperature and relative humidity are not to be overlooked.

Wire Coil on Hose Held in Proper Place

The rubber hose of the vacuum filling remover on some models of looms is protected by a coil spring. The spring prevents the hose from rubbing against the loom side or other angular pieces during the operation of the loom.

Sometimes the spring has a tendency to slip down behind the tilting magazine. When it does slip, it leaves the hose exposed at the end where it might be damaged.

A piece of steel strapping with one end fastened around the loom arch and the other around the coil spring will hold the spring in place. The strapping is flexible enough to give the hose the necessary freedom when the pick-up moves down on the transfer or when the magazine swings over on the front cell on a change.

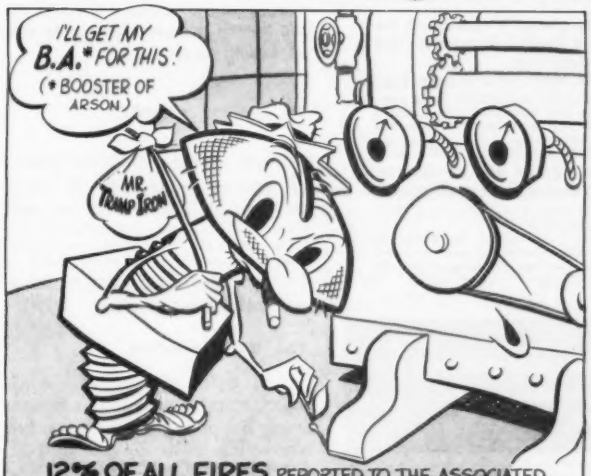
Card With Sample Filling Reduces Mixing of Colors

When a fabric with two or more colors of filling is being woven, there is a possibility that a weaver may inadvertently fill one of the magazine slides with a wrong color of filling. The warp may be started with the proper colors in the slides; but with two or three shifts of weavers, colors are often mixed before the warp runs out, particularly if the colors are very close in shades. Some system should be used to help prevent a wrong color of filling being woven into the fabric.

A tag may be tied to the front of the magazine, and the kind and color of the filling can be marked for each magazine slide. The tag will serve as a constant reminder for the weaver.

In order to make the tag more effective, a small skein of the different filling yarns used may be stapled to the card in their proper order. This task should be done by the person who is responsible for starting the warp. The card should be removed when the warp is woven out.

ERIEZ MANUFACTURING CO., ERIE, PA., U.S.A. • PRODUCERS OF MAGNETIC SEPARATORS AND SELLERS OF (RCA) ELECTRONIC METAL DETECTORS



12% OF ALL FIRES REPORTED TO THE ASSOCIATED FACTORY MUTUAL FIRE INSURANCE COMPANIES OVER A 7-YEAR PERIOD WERE CAUSED BY FOREIGN MATERIAL IN STOCK. ***ERIEZ*** *PERMANENT MAGNETIC SEPARATORS* PREVENT SUCH FIRES BY REMOVING TRAMP METAL FROM FOODS, CHEMICALS, TEXTILES, GRAIN, RUBBER, ETC. IN PROCESS.... MAINTENANCE AND DOWNTIME ARE ALSO ELIMINATED.

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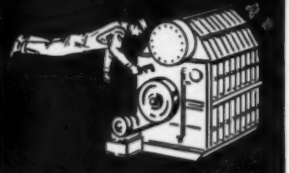
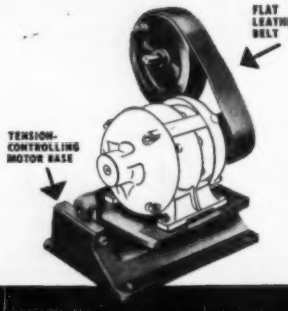
51 H

You'll Seldom See
Your Maintenance Man
Hovering Over A
UNI-PULL DRIVE





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THICKENER STUDY Points Way To Improved Printing Exhaustion

- *British research sheds light on "whys" of both starch penetration and print-dye transfer*
- *Rate of dye transfer is aided by addition of sodium alginate to the thickening paste*

By ERNEST RHODES

STARCH ETHERS AND ESTERS possess many advantages over the more usual starch thickeners that may well assure the eventual replacement of the latter in both warp sizing and print dyeing, research work carried out at the College of Technology, Manchester, England, has revealed.

The Basic Problem

1. A typical application of starch pastes in textile processing is in warp sizing. But pastes derived from cooked starch jell when allowed to cool, through crystallization of the starch molecules. Thus the size is prevented from penetrating well into and between the fibers. Since this crystallization leads to mechanical difficulties during and after weaving, it is clear that ordinary starch products are not suitable for yarns for which sizing requirements are high, as with viscose rayon. This assumption has been confirmed in practice.

2. Printing pastes prepared with the usual starch products as thickeners show evidence of poor qualities because of this same deterioration, and so they often have poor stability, insufficient penetration, and hence poor leveling of the dye used in printing. The dulled colors of dyed or printed fabrics after finishing can thus be traced to this phenomenon of crystallization of starch in solution.

Approach to the Problem

With this difficulty in mind, water-soluble starch ethers and esters were closely examined. Experiments proved that starch derivatives could be prepared that did not show this crystallization and hence would not jell when cooled. This improved procedure can be ascribed mainly to an etherification and esterification of the straight-chain fraction of the starch that diminishes the possibility of association and crys-

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▶ **Investigations have recently been made by a team of British research workers, under the direction of H. A. Turner (F. R. I. C.), looking into the characteristics of thickeners and printing agents.**

Their studies have been on starch, starch-degradation products, and starch derivatives. Outstanding results have been obtained with an improvement in dye exhaustion that appears to provide more-easily-worked-with carboxyl-group derivatives.

tallization of the linear amylose molecules. The straight-chain portion of the starch molecule was thus converted into a branched-chain type.

This greater suitability of starch derivatives for thickeners and for printing pastes was then taken a step further in an investigation of dye transfer during steaming. An experimental technique was worked out for measuring the amounts of dyestuff transferred. This technique has produced results that should be of great value.

In these investigations there were three possible avenues of attack: (1) the coloristic one that concerns the action of the dyes themselves during the printing process, (2) the micro-mechanical one that requires an understanding of the incompletely known colloid chemistry involved, and (3) the one that studies the actual process by which the dye passes from the applied-dye substance to the fiber.

It is this third approach that has proved to be the most fruitful in unlocking information and giving the researchers an understanding of the method of diffusion of dye into the swollen cellulose that takes place during steaming.

Rate-of-Transfer Study

Experimentally, the first consideration was to devise a means of determining the amount of dye transferred, and hence the rate of transfer. To eliminate the uncertainty of deciding when the dyeing process that occurs during printing should begin and end, the following method was devised and was used throughout the study.

1. The printing paste was spread in a layer of known thickness over a glass plate and dried in a current of moving air at room temperature. The amount by which the film was dried had to be strictly controlled, for if taken too far, the film became too brittle for use. To keep the film pliant, air of a fixed humidity was used during drying. The film was then cut into disks of a known area. Sample disks were checked for dye content by a standard colorimetric method.

2. A cellulose sheet, previously

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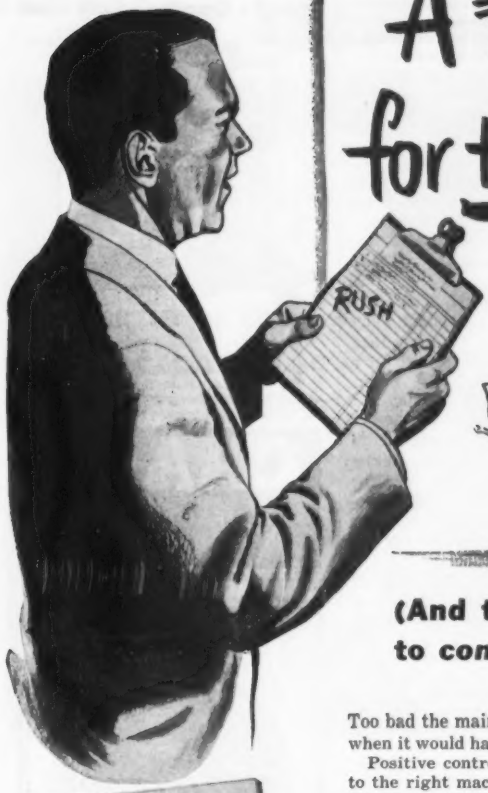

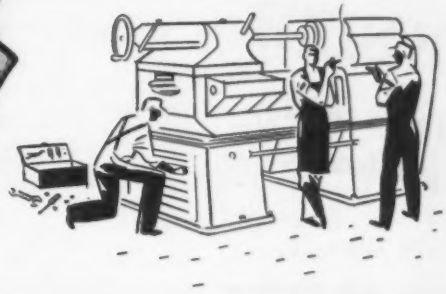

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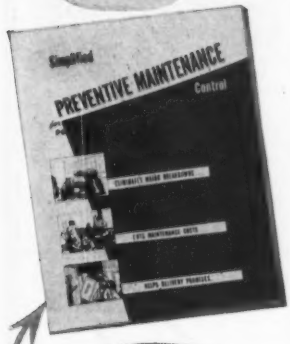

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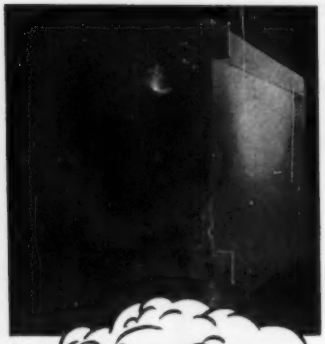

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Two possible explanations for the dye-exhaustion process:

▶ In the first theory, an electrolytical one, the presence of sodium and dye ions is believed to set up a potential difference that tries to drive the sodium ions away from the cellulose and hence to drag the dye ion with it.

In the second theory, there is believed to be a potential barrier set up by the cellulose in water, as it acquires a negative charge, that repels dye ions so that only ions with high energy can get through. A starch film in water also becomes negatively charged. This phenomenon tends to lower the potential barrier of the cellulose sheet upon which it was placed.

swollen in water to a constant water content, and the paste film were then squeezed together and steamed in a standard piece of laboratory equipment for a given length of time. The film was then removed from the cellulose sheet, and the amount of dye transferred was estimated, either through a determination of the amount of dye taken up by the cellulose; or conversely, through a determination of the amount of dye remaining in the film.

3. Experiments were first carried out on direct dyes. The amounts of dye transferred from the film of starch to the cellulose sheet were plotted graphically against the time of steaming. A smooth curve was obtained. However, it was found that the exhaustion of the dye was not a simple function of the amount of dyestuff originally present. Under the best condition, a 70% exhaustion was obtained —a result that is surprising when one considers the low electrolyte content of starch. Half-dyeing time was in the region of 15 min., which time compares favorably with normal dyeing.

4. Efforts to make the starch paste more negative by the introduction of negative groups produced no striking results. Additions of sodium alginate to provide carboxyl groups were then tried. These additions resulted in an immediate jump of the dye exhaustion to 100% after only a short time in contact. The work was then extended to etherified starches, and similar results were obtained. It was also found that the addition of an electrolyte, like common salt, served to increase the exhaustion, but only up to about 93%.

In a more complete effort to understand the effect of the thickening agent, a series of starches was studied. But the measurable exhaustion effects of corn starch, potato starch, British

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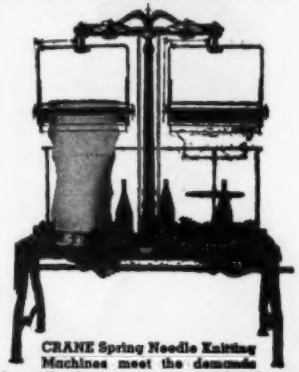

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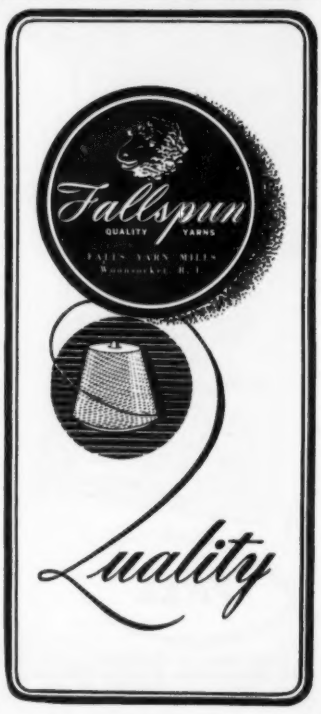

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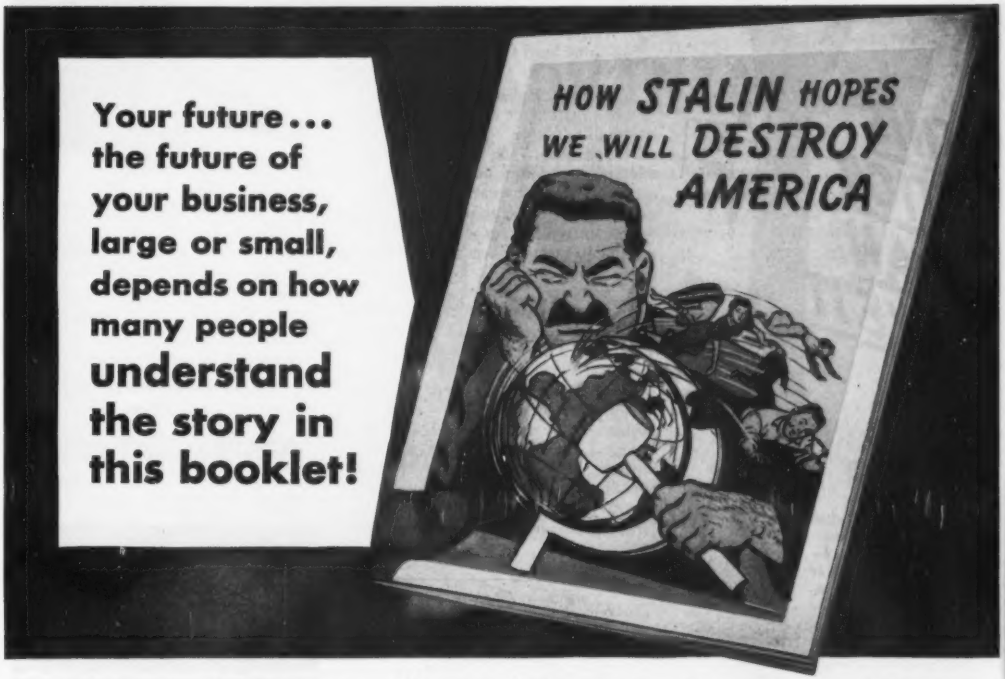
Your future... the future of your business, large or small, depends on how many people understand the story in this booklet!
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ONE TOOL YOU CAN USE: To help us give our own Bemis workers the inflation picture, we used the colorful, new 16-page booklet "How Stalin Hopes We Will Destroy America" produced by Pictorial Media, Inc. The more widely the booklet is used, the more good it will do . . . and it is available for distribution to your workers, too. It follows the time-proven "comic book" technique . . . dramatizes the dangers . . . and shows how all our citizens can help halt inflation before it's too late.

TESTS SHOW IT HELPS WORKERS: To get an impartial judgment of the value of "How Stalin Hopes We Will Destroy America," it was tested in Bemis plants by the Psychological Corporation under the direction of Dr. Henry C. Link, a foremost research authority. Dr. Link says "Those workers exposed to the booklet were found to have a significantly higher appreciation of the recommended ways to stop inflation than did the workers who did not see the booklet. Details of this test are available upon request." And Bemis factory workers make such statements as "Everything it says hit home, but you'd never figure it out for yourself until you read it"...."It's told in an interesting way so anyone can understand. My daughter, age ten, understood all of it"..."In picture form it impresses you more. Most people don't read about it"..."Had ideas that we wouldn't think about otherwise while we are working away—good book, agree with it—I guess I won't be the only one."

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gum, and gum traganth were found to be small compared with the huge exhaustion effect of sodium alginate. It is thought that this varied result may have some relation to the proportion of amylo pectin contained in each substance.

Pointers for Supervisors

(*Continued from page 162*)

4. When tests are found to work in one situation, it can't be presumed they will work out equally well in another situation. A test battery for selecting weavers in one mill may not successfully select weavers for another mill. Again, test-score standards based on present employees may not be applicable to future or even current applicants.

These points are not made to discourage the use of tests for placement. They are intended to indicate that solid and continuous study is needed to ascertain the value of tests. Testing is not an easy cure-all for selection problems. Its results should not be expected to be spectacular. It can, however, make a real and substantial contribution to the selection problem if it is a contribution that is proven, rather than merely claimed or assumed.

Electrical Fires

(*Continued from page 133*)

on the effectiveness of the grounds, we must be careful to maintain the best possible low-resistance grounds. Bonding to an underground water main is preferred. Using deeper or multiple grounds, or even salting the grounds is sometimes necessary. All lightning-protective devices must be periodically and frequently inspected, before and during the lighting season.

Reliable and adequate lightning protection should be provided on the primary as well as on exposed secondary sides of mill substations. If the exposure warrants it, this protection is recommended regardless of the ownership of the transformers, and even though little trouble had been experienced in the past.

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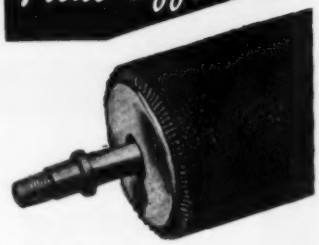

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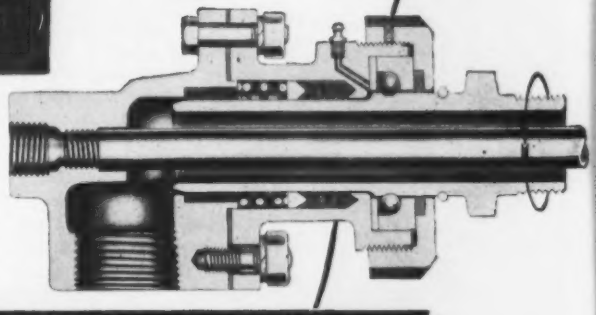

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stallations have been made without due consideration being given short-circuit-interrupting capacities.

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Because of the tremendous amount of short-circuit current available at most of the larger mills, it is frequently economically advisable and sound engineering to arrange a cascaded circuit-breaker system. Such a system uses one main breaker that may require interrupting capacities of as much as 100,000 amps. Then, through proper coordination of the feeder breakers, their interrupting capacities may be selected on a considerably lower basis. In recent years, air-core reactors, which we normally associate with generating equipment, have been applied to industrial switchgear to limit the fault currents to values which can be safely handled.

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Solution:
Plant-Owned Distribution System

When the load reaches such size, it is time to consider a plant-owned distribution system at some intermediate voltage. Unit substations or their equivalent could be located outside of the mill buildings near various centers of load. These substations should prove advantageous in power loss, copper size, and reliability. Short-circuit requirements should be reduced. Then, through standardization of circuit breaker and transformer sizes, economical stocking of spare units should be possible.

FIRE CAUSE #5:
Use of Improper Control Enclosures

Until recently, most cotton mills have persisted in the use of NEMA Type I (General-Purpose) enclosures for industrial-control equipment. Although some of these enclosures are fairly tight, they do not exclude lint in actual practice. Lint will enter just about any opening through which air

42

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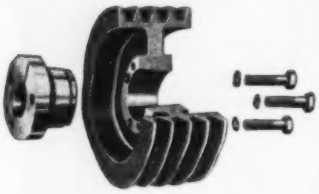

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can circulate. Lint filters in through mounting holes which are not plugged, through unused conduit openings, through poorly formed corners and seams, or through loose-fitting covers. Needless to say, it also gets into mechanism when covers are knocked off or left open.

The gradual accumulation of lint within the enclosure of such devices as starters, switches, contactors, and similar equipment eventually causes a large part of the trouble. Possibly fire comes from a spark dropping on the lint bed which accumulates in the bottom of the enclosure; possibly from a wad of lint getting between contacts causing one to run hot; possibly a conducting path may be built up between poles resulting from gradual carbonization of lint. In any case, the cotton mill has a problem.

Solution:

1951 Code Revision and Better Enclosures

The need of improved equipment has now been recognized by many of the more progressive engineers and contractors working with the electrical engineers of cotton mills and with insurance companies. Several electrical-equipment manufacturers are now designing, and some have placed on the market, equipment housed in more suitable enclosures.

The National Electrical Code contains a most helpful and significant revision in the 1951 Edition. The Code for many years has rightly recognized the extra hazard of a cotton mill, and has classified most manufacturing areas as a Hazardous Location, Class III, Division I. As there was no enclosure for arcing parts specifically designed for the condition, the 1940 Code required that switches, controllers, fuses, and circuit breakers conform to the requirements for Class-II equipment. This equipment is the very expensive, usually cast-metal enclosure designed for use where explosive or electrically conducting dusts are present.

The 1951 Code has, in effect, eliminated reference to Class-II Equipment in paragraph 5074, but requires that the enclosure be constructed to exclude lint, and prevent ignition of adjacent combustible material by overheating or escape of sparks or burning material. While this may at first glance appear to be a reduction in requirements, actually it will result in securing an improvement in the installation. For many reasons, the former code requirements in effect for over ten years were not followed. Hardly a single installation would conform to them. Instead, ordinary-purpose enclosures were used. Now, the way is

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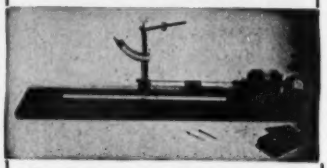

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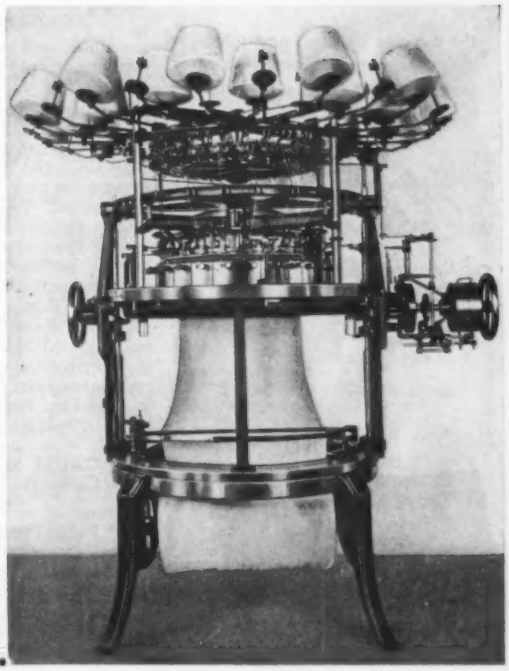

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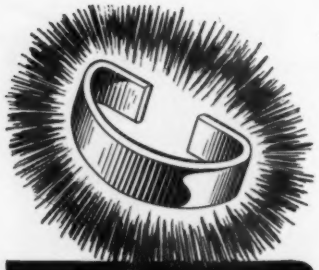

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open to use suitable enclosures (not ordinary-purpose enclosures) that will do the job, conform to code requirements, and that will not be prohibitive in cost.

Many prominent engineers, architects, and contractors handling textile installations have recognized the need of an enclosure substantially better than the ordinary-purpose (NEMA 1) type and have for some time specified NEMA 1A (semi-dust-tight) or better. Quite a few cotton mills have also standardized on NEMA 1A construction.

Some equipment manufacturers have made NEMA 1A construction readily available; others have redesigned NEMA 1A enclosures to eliminate holes and louvers, and make them really tight. Others have brought out entirely new designs, and some are developing enclosures designed to meet the new code requirements. In certain instances where lint conditions are particularly severe, NEMA Type IV (water-tight) or Type V (dust-tight) enclosures are recommended. They do a very good job where applied. However, they are not approved by Underwriters' Laboratories, Inc. for use in other than ordinary locations, and some mills object to cast-iron enclosures for various reasons.

NEMA Type 1A is known as a semi-dust tight enclosure. It is basically the general-purpose NEMA Type 1 sheet-metal enclosure with all its faults, but with the advantage of a gasket around the cover. It may still retain the same mounting holes and other openings of the NEMA Type 1 enclosure.

The general-purpose NEMA Type 1 enclosure is not acceptable for cotton-mill use under the National Electrical Code and is not recommended by most insurance company inspection departments. This type is considered inadequate for this application by most of those who have seriously studied the problem. Considering only the equipment currently available, the least that should be considered for use in any operating part of a textile mill is the NEMA Type 1A. Some of these are not really suitable unless the user takes special precautions to close up, and keep closed, the various unnecessary openings.

FIRE CAUSE #6:
Loose Connections

Solution:
Use Suitable Flexible Cord

To minimize the difficulties of keeping the flexible-conduit connections to motors tight and to eliminate trouble caused by broken flexible conduit, the use of Type SO or ST (oil-resistant, heavy-duty) flexible cord is advocated. This cord should have a fourth conductor, green in color, for equipment grounding. Some motors are now provided with such cords by the manufacturers. Special, water-tight, flexible-cord connectors should be used with this cord. Armored-cable connectors will damage the insulation.

FIRE CAUSE #7:
Group Drives and Group Fusing

Another location where electrical equipment is frequently misused is in the group-motor-drive circuits and group fusing so common in weave rooms. It is customary to provide a manual starter to control each individual loom motor and to group a number of these loom motors on one circuit, not only for convenience in wiring, but so that they may be group-started. These individual loom motors are protected by manual motor controllers which incorporate thermal over-current protection. The controllers are not designed to provide short-circuit protection and generally will fail if they attempt to clear a short circuit of the magnitude usually encountered. Short-circuit protection for the motor and controller must be provided by some other device.

Solution:
Use Controllers Approved for Group Fusing

According to the National Electrical Code, unless specifically approved for group fusing, each such individual motor controller must be protected at a value not greater than "four times the motor-full-load current rating." Assuming that we are dealing with 1-hp. 600-v. 3-phase motors, we can approximate the motor full-load current as 1 amp. Therefore, to protect the equipment properly, each motor controller should be protected at about 4 amps. Not many installations are made in this manner. To provide a more flexible arrangement, manual motor controllers especially designed for group-fuse installation have been developed and are so listed by Underwriters' Laboratories, Inc. "for use when protected by 'Fuses' of ratings greater than four times the full-load current of the motor that it is designed to control. The device is marked with the rating of the maximum fuse with which it may be used (Group Fusing)." Usually, in 600-v. loom-motor applications, this rating is a 30-amp. limit. Obviously, with group starting, which requires an approximate six times full load current, we cannot start 30 1-hp. motors through a set of ordinary 30-amp. fuses. In some instances the required fuse protection and that recommended by the manufacturer is completely ignored and the circuits protected at greatly increased

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Aluminum is required for planes and other military needs. Reynolds *Lifetime* Aluminum Industrial Corrugated is still produced, but the total supply is necessarily reduced. DO-rated orders receive priority handling.

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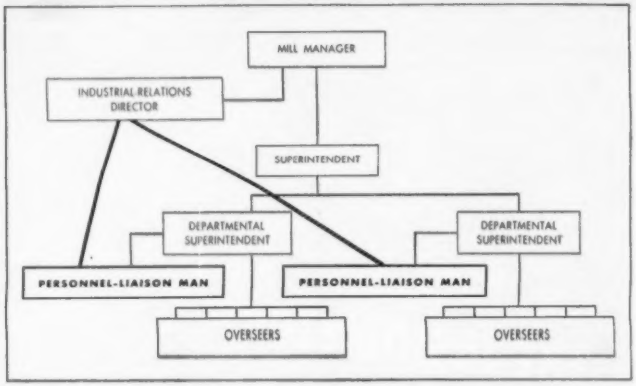
values. Only the circuits are thus protected, because protection is certainly not afforded the motor controller. It would be in the interest of all concerned for the cotton mills buying loom switches to install them properly in accordance with the manufacturer's recommendations and those of the National Electrical Code. If group-starting of a large number of motors is planned, then a number of properly protected groups can be further grouped and protected with a suitable-sized circuit breaker or fuse.



A PERSONNEL-LIAISON MAN with a desk near the office of each department superintendent, who reported directly both to departmental superintendent and industrial-relations director, paid his way in one mill by settling grievances at low levels and permitting production men to spend more time on production problems.

Departmental-Liaison Men Reduce Personnel-Relations Cost

▶ *This woolen and worsted mill put two men through the mill, then put each one in a departmental superintendent's office to help solve personnel problems. Result: Production men were able to devote more time to production, less to personnel problems; grievances were settled at low levels; and high-priced talent wasn't tied up in lengthy personnel conferences.*

By MONROE B. SCHARFF

THIS IS THE STORY of how one large Northern woolen and worsted mill solved the problem of having overseers, department heads, and even superintendents spend too much time on personnel and labor-relations problems and too little on production.

Hundreds of supervisory hours were being lost every week on non-manufacturing problems. The personnel manager knew little about the details of the textile business. How in the world, production men asked, could he be expected to handle dollar-and-cents grievances involving machines, work loads, rates, and such, if he didn't understand the production set-up and skills involved? Possibly that is why the production boys didn't seek his help. They didn't have faith in his knowledge of their problems.

In other words, in spite of the excellent industrial-relations program this mill had, or of how well manufacturing and personnel people worked together, there was always room for more efficiency, teamwork, and understanding.

The Plan

Here is how the mill went about

(*Continued on page 270*)

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News OF THE MONTH

Fiber X-51 Being Evaluated. Production of a new acrylic fiber, temporarily called X-51, has been started in small amounts by American Cyanamid Co. at a pilot plant in Stamford, Conn. Experimental quantities are being evaluated for spinning, weaving, knitting, and dyeing qualities. The new fiber is to be produced in continuous-filament and staple forms. The fiber is said to be easily dyeable with acetate dyes and in some colors by some other types of dyes. Full commercial production and a final name for the fiber have not yet been decided upon.

Heat-Resistant Cottons. A treatment of cotton that makes it four or five times more resistant to heat and rot than the untreated fiber has been developed by the Southern Regional Research Laboratory, New Orleans, La. The partially acetylated cellulose process allows for cotton ironing-board and pressing-machine covers to be made that compete successfully, even in lighter weights, with synthetic-fabric covers of this type. The process was developed in the SRRL search, now successful, for ways to make cotton fabric resistant to mildew.

Jute Substitute Sought. American kenaf, a substitute for jute that sponsors hope will one day become a $300,000,000 crop, has been planted from seed in 640 acres of a 3,500-acre tract of rich organic muck land around Lake Okeechobee in Florida. The Commodity Credit Corporation has made available to American Kenaf Fiber Corp., Palm Beach, Florida, seeds produced in Cuba. The CCC charged the company 98½¢ per pound of seed and has contracted to buy all finished fiber after the harvest. Yield is expected to be 1,500,000 lb. of fiber, worth $450,000 at the contracted government price of 30¢ per pound for top-quality fiber. As seed becomes more plentiful in years to come, only 500,000 acres of black land (at 2,000-lb. yield per acre) are seen as needed to produce enough

Textile Calendar

Summer Refresher Course, Teachers College of Columbia Univ. and U. S. Testing Co., Hoboken, N. J., July 23 to Aug. 10, 1951.

First Annual Textile Workshop, Lowell Textile Institute, Lowell, Mass., July 23 to Aug. 31, 1951.

American Society for Quality Control, textile quality-control conference, Clemson, S. C., Aug. 23 and 24, 1951.

American Chemical Society, diamond jubilee, New York, Sept. 3 to 7, 1951.

AATCC, Southeastern Sect., Columbus, Ga., Sept. 8, 1951.

National Instrument Conference, Sam Houston Coliseum, Houston, Texas, Sept. 10 to 14, 1951.

AATT, meeting, Builders Club, New York, Sept. 12, 1951.

Fiber Society, fall meeting, Swampscott, Mass., Sept. 13 and 14, 1951.

National Assn. of Cotton Mfrs., 97th annual meeting, New Ocean House, Swampscott, Mass., Sept. 13 and 14, 1951.

AATCC, Phila., Sect., Kugler's Restaurant, Philadelphia, Pa., Sept. 14, 1951.

AATCC, Hudson-Mohawk Sect., Jack's Restaurant, Albany, N. Y., Sept. 21, 1951.

AATCC, Piedmont Sect., annual meeting, Charlotte, N. C., Sept. 22, 1951.

AATCC, Mid-West Sect., Morrison Hotel, Chicago, Ill., Sept. 29, 1951.

AATT, meeting, Builders Club, New York, Oct. 3, 1951.

Carded Yarn Assn., *annual meeting,* Carolina Hotel, Pinehurst, N. C., Oct. 4, 1951.

39th Annual Safety Congress and Exposition; Stevens, Palmer House, Congress, and Morrison Hotels; Chicago, Ill.; Oct. 8 to 12, 1951.

AATCC, national convention and Textile Exposition, Statler Hotel, New York, Oct. 17 to 19, 1951.

North Carolina Cotton Mfrs. Assn., annual meeting, Carolina Hotel, Pinehurst, N. C., Oct. 18 and 19, 1951.

Packaging Institute, annual forum, Hotel Commodore, New York, Oct. 22 to 24, 1951.

AATCC, Hudson-Mohawk Sect., Hotel Utica, Utica, N. Y., Oct. 26, 1951.

AATCC, Northern N. E. Sect., Lowell Textile Institute, Lowell, Mass., Oct. 26, 1951.

AATCC, Phila. Sect., Kugler's Restaurant, Philadelphia, Pa., Oct. 26, 1951.

AATCC, R. I. Sect., Providence Engineering Society, Providence, R. I., Oct. 26, 1951.

AATT, meeting, Builders Club, New York, Nov. 7, 1951.

Textile Research Institute, annual meeting, Waldorf-Astoria Hotel, New York, Nov. 8 and 9, 1951.

AATCC, R. I. Sect., Johnson's Restaurant, Providence, R. I., Nov. 16, 1951.

AATCC, Northern N. E. Sect., annual meeting, Boston, Mass., Nov. 30, 1951.

AATT, meeting, Builders Club, New York, Dec. 5, 1951.

AATCC, Hudson-Mohawk Sect., Jack's Restaurant, Albany, N. Y., Dec. 7, 1951.

AATCC, Phila. Sect., Kugler's Restaurant, Philadelphia, Pa., Dec. 7, 1951.

AATCC, Southeastern Sect., La Grange, Ga., Dec. 8, 1951.

1952

Plant Maintenance Show, Convention Hall, Philadelphia, Pa., Jan. 16 to 19, 1952.

Fiber Society, spring meeting, Clemson House, Clemson, S. C., April 16 and 17, 1952.

Cotton Mfrs. Assn. of Georgia, convention, Boca Raton Hotel and Club, Boca Raton, Fla., April 16 to 18, 1952.

Knitting & Allied Crafts Exposition, sponsored by Natl. Knitted Outerwear Assn. and Underwear Institute, Grand Central Palace, New York, April 21 to 25, 1952.

17th Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 6 to 11, 1952.

1953

Knitting Arts Exhibition, Atlantic City Auditorium, Atlantic City, N. J., April 27 to May 1, 1953.

1954

American Textile Machinery Exhibition, sponsored by National Association of Textile Machinery Manufacturers, Atlantic City Auditorium, Atlantic City, N. J., April 26 to May 1, 1954.

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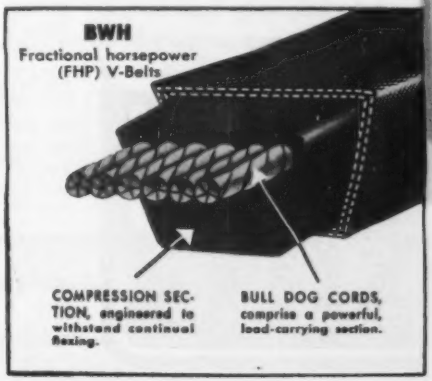
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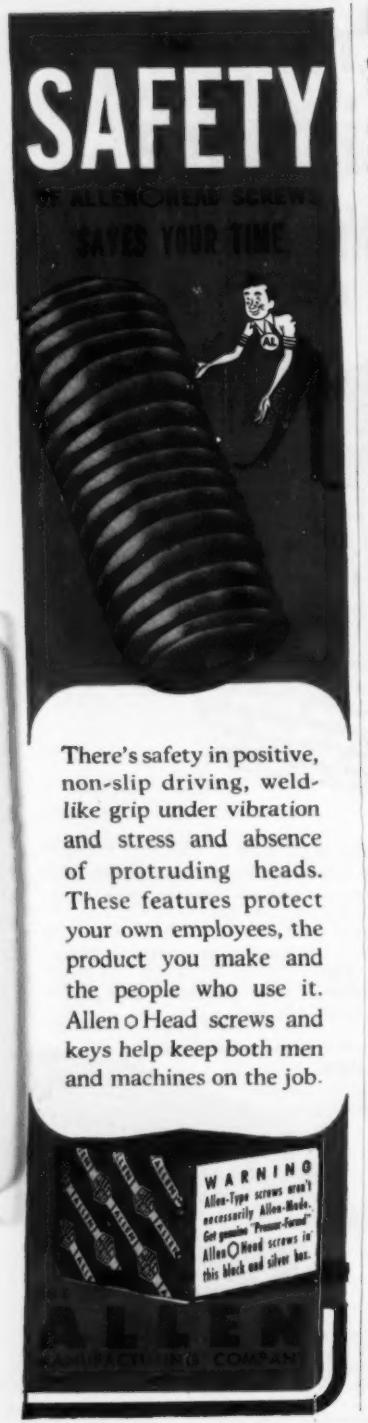
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NEWS *of the Month*

(Continued)

fiber to supplant the entire U. S. supply of jute currently available.

Future Yarn-Making Techniques. Fine rovings of different fiber content, combined on a specially built spinning frame so that the fibers might be placed preferentially in the yarn (one kind outside and another kind inside, for example), are something to shoot for in the future, Prof. Edward R. Schwarz, professor of textile technology and head of the textile division of MIT, said at a recent meeting of the American Assn. of Textile Technologists in New York. Possibly several banks of drafting units would serve. Perhaps initially, mule spinning could be adopted for such a procedure. Prof. Schwarz said that years from now doubling and drafting might eventually be done away with, and static electricity or aerodynamics or some other means of controlling fiber placement might be used.

Warp-Knit Nylon Strengthened. A process whereby the degree as well as the direction of compacting of nylon warp-knit fabrics can be accurately controlled for size, appearance, and strength purposes has been developed by Triangle Finishing Corp., Johnstown, N. Y. The technique, a finishing process, consists of shrinking the loops up smaller, and thus increasing the number of wales and/or courses per inch, as desired. The process is said to have reduced the porosity of some industrial fabrics by as much as 150%. On one supposedly stabilized knit fabric, the company claims to have increased the number of wales by about 72%, the number of courses by about 17%, and strength by 17%. Details on the chemicals involved in the procedure were not given.

Full-Fashioned Machinery Report. There are now 11,464 full-fashioned knitting machines in the United States, a figure 118 less than in 1950, Textile Machine Works, Reading, Pa., has reported in its annual Statistical Survey. Knitting men exported or scrapped 1,198 machines during the past year while they were installing only 1,080 new ones. Sectionwise, 292,000 sections in 1950 have now grown to 294,809. In terms of sections, 66 gauge has become 3/10 of 1% of the over-all total, 60 gauge is now 11%, 51 to 57 gauge is 48%, and the balance is in coarser gauges and is probably earmarked for the scrap pile. The South now has 42.7% of all full-fashioned machines, Pennsylvania 38.7%, and the rest of the country 18.6%. In 1931, a mill averaged 48 machines; today's average is about 15 machines per mill.

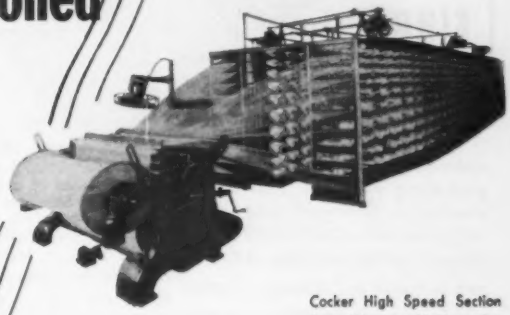
J. K. MILLIKEN, co-founder, president, and treasurer of Mount Hope Finishing Co., North Dighton, Mass., was honored with an inscribed plaque signed by 150 company employees at the recent 50th-anniversary celebration of the firm. The company, started from scratch in 1901, now has 28 acres of floor space.

New Warp Knitting Plant. A specially designed, newly completed building and the uninterrupted knitting of 15- to 75-den. nylon and rayon 90-in.-wide hexagonal-loop net fabrics on 12 Reiner Kay looms at 243 stitches per min. were the technical highlights displayed at the new Dy-Co Mills "open house" at Norwood, N. J., late in June. Other equipment in the conditioned one-story plant consists of two 168-in. Reiner High-Speed tricot machines with floor space for two or three more, two Reiner warpers and creels, and a start-stop-slow and reverse-speed inspection unit with under-the-fabric lighting.

Alumni Group Formed. Alumni of N. C. State College School of Textiles, Raleigh, N. C., in the New York area have banded together into a group that has future plans of benefit to the school, the industry, and the individual members. William A. Newell, managing editor of TEXTILE WORLD, was unanimously elected president of the organization for the coming year. Richard Garrett of Greenwood Mills and Irwin Kissel of Tulip Fabrics Co. were elected vice presidents. Mike Reiter, Security Mills, Inc., is secre-

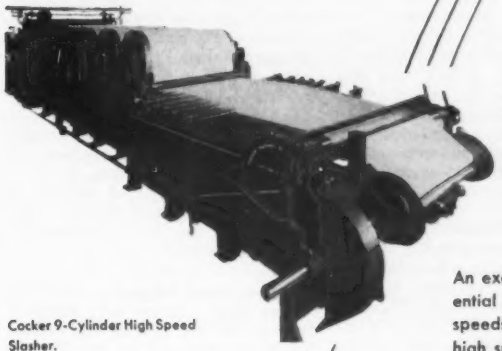
High Speed Production ....Accurately Controlled

Rugged construction and heavy, self-aligning ball bearings permit continuous high speeds with a minimum of vibration. This, combined with remarkably sensitive controls, makes these machines the most economical and efficient on the market.



Cocker High Speed Section Beam Warper with Magazine Cone Creel and Electric Eyeboard Stop Motion.

A built-in magnetic brake provides smooth, instantaneous knock-off action. The electrical eyeboard stop motion makes it possible to catch and tie a broken end before it gets to the beam. The electrical automatic counter clock takes its readings directly from an accurately turned beam cylinder. Easily accessible, smooth acting snubbers and convenient beam doffer further enhance the value of this machine.



Cocker 9-Cylinder High Speed Slasher.

An exclusive feature of this Cocker 9-Cylinder Slasher is its Differential Friction Compensating Control which allows continuous high speeds without heating of Friction. Its graduated drive goes from high speed to crawl without overrun of beams, and from crawl to high speed without strain or jerk on the yarn. This slasher has full push-button control, with finger-tip control of tension on the yarn. An exclusive new type Friction produces hard beams which hold 20% to 25% more yarn per loom beam.

The Cocker 9-Cylinder Slasher works equally well on cotton, rayon, spuns, and other type yarns. Write or wire for full information and consultation.

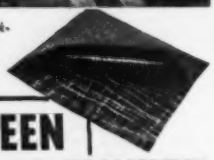
THE LEADER
COCKER
AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

For more information, write direct or use Reader Service post card.

For wrapping, packaging all textiles, for shipment or storage.



FIBREEN
ASSURES COMPLETE PROTECTION

YOU save time, labor and money when you adopt FIBREEN packaging methods. This tough, waterproof, reinforced wrapping is easy to handle . . . takes less time . . . protects textiles from dirt and moisture in transit and storage . . . makes a light, compact package . . . reduces shipping and storage costs.

The FIBREEN method shown above has many sound advantages, such as:

- A moisture and dirt-resistant package is assured.
- Combined material and application cost is low.

What's *your* packaging problem? Qualified FIBREEN packaging engineers with over 20 years' practical experience will gladly cooperate with you.

Write Dept. T-8
for samples and data

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THE SISALKRAFT CO.
205 West Wacker Drive, Chicago 6, Ill.
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NEWS *of the Month*

(Continued)

tary-treasurer. At the first meeting, Dean Malcolm E. Campbell of the school told of his visits to 20 countries since last summer and pointed out that the enrollment of foreign students in our colleges is the best builder of good will abroad that the textile industry and the United States as a whole can develop.

Belgian Mills Modernizing. There is a definite gap between the amount of American textile machinery being made available to Belgium and what could be sold to Belgian textile manufacturers, said Norman E. Horn of Wallace Clark & Co., Inc., New York, recently returned head of the ECA-sponsored American Cotton Textile Mission to Belgium. Other members of the group that went to Belgium were Prof. John F. Bogdan, N. C. State School of Textiles, and Ian Walker, textile engineer. Belgium has enough dollar credit to cover a long period of machinery replacement, Mr. Horn stated, and the program of textile-equipment buying will continue as long as the Belgian economy rises. Most popular new equipment going into Belgian cotton mills now are the Picanol "President," Swiss Ruti, and British Northrop looms; Italian shuttles; and the Hibbert system of slasher control. Even more substantial improvements in Belgian-mill quality and productivity are foreseen when the new machinery programs are completed.

Worldwide Test-Standard Difficulties. Data on 16 methods of testing various qualities of fabrics have been brought back home for evaluation by the American Assn. of Textile Chemists and Colorists from the recent International Organization for Standardization meeting held at Bournemouth, England. C. Norris Rabold, Erwin Mills, Inc., Cooleemee, N. C., president of AATCC, and Leonard S. Little, consultant and chairman of the AATCC executive committee on research, reported on the methods at the chemical organization's national

RAG-PICKING MACHINERY loaned by Davis & Furber Machine Co. was one of the aids in a special one-week course on reprocessed and reused fibers conducted recently at Lowell Textile Institute, Lowell, Mass. The course was conceived and directed by Prof. James H. Kennedy, Jr., head of the Institute wool department, and was sponsored by the Wool Stock Institute and the Textile Fibres Processors Institute of the National Assn. of Waste Material Dealers, Inc. Eighty men attended the sessions.

council meeting in New York recently. They reported, for example, that discrepancies exist between American and European procedures for washing and lightfastness, (1) because of the European general lack of facilities for mechanical agitation in washing, and (2) because of the lack of sunlight-simulating carbon-arc lamps in appreciable numbers. The difficulty of settling on one standard testing machine for the whole world for each test, which would be necessary under 100% standardization, was recognized; as was the difficulty in selling to U. S. technicians the universal method of numbering yarn (based on the metric system) that was also recommended at Bournemouth.

Lighting Award Offered. A $2,500 "merit-award" competition, designed to help mobilize lighting knowledge, has been announced for the Fourth International Lighting Exposition and Conference to be held next May at Cleveland, Ohio. The competition has been set up by the exposition committee to help contribute to the advancement of improved lighting through the setting up of a clearing house for the exchange and dissemina-

GLASS-BLOCK FENESTRATION over a clear-vision strip enhances the exterior of the new Pinecrest Cotton Mill, Pine Bluff, Ark. (left). It also distributes daylight softly and evenly in the interior (right). The glass blocks, manufactured by Pittsburgh Corning Corp., also have insulating qualities that contribute to efficient temperature and humidity control.

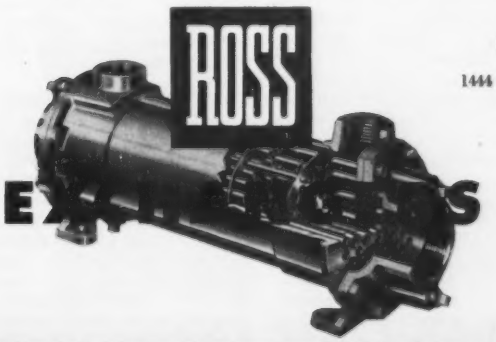
another textile application where Ross Exchangers prove most practical

As numerous mills and textile machinery manufacturers already know, a Ross Exchanger as a built-in feature on bleaching apparatus has unrivaled advantages.

This is well illustrated by four bleaching machines recently built by a New England textile equipment manufacturer for one of the nation's largest thread companies. Each features a Ross Type SSCF All-Stainless Steel Exchanger as a standard component. Purpose: to preheat peroxide solution and maintain it at the temperature required for the process. The peroxide is simply circulated through the tubes of the exchanger, to be heated by steam in the shell.

Because Type SSCF, like other Ross fully standardized exchangers, is a pre-engineered line, engineering time was considerably reduced, while individualized fabrication was eliminated. The well known Ross system of standardizing and mass-producing components and sub-assemblies enabled quick assembly into pre-engineered designs and sizes, thus paying off again in time and costs to machinery builder and user alike.

To obtain details on Ross standardized exchangers of stainless steel, copper and other materials for *any* heating or cooling service, request specific literature and consult your nearby Ross representative.



ROSS HEATER & MFG. CO., INC.
Division of American Radiator & Standard Sanitary Corporation
1444 West Avenue, Buffalo 13, N. Y.
In Canada, Horton Steel Works, Limited, Fort Erie, Ont.

Serving home and industry
AMERICAN STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA IRON

Now Extract
LARGE LOADS
Faster!

Tolhurst's new 72" Center-Slung Extractor incorporates an entirely new method of stabilization, which enables it to handle greater out-of-balance loads in double-quick time. Less care is required in loading; fewer redistributing stops are necessary. Triangular bed plate permits anchoring to the floor.

2 TYPES AVAILABLE

Can be equipped with manual or fully automatic controls. Cover is safety type. Machine can be stainless steel, monel or rubber lined. To extract LARGE LOADS *faster* . . . investigate today!

New 72"
TOLHURST
Center-Slung*
EXTRACTORS

*TM Reg.

Send Today For Free Catalog

TOLHURST CENTRIFUGALS DIVISION
AMERICAN MACHINE AND METALS, INC.
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WITHOUT OBLIGATION, send Tolhurst catalog on Center-slung and other extractors especially designed for the textile industry.

Firm Name_____
Street Address_____
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NEWS *of the Month*

(Continued)

tion of good lighting information. The committee feels that all industrial plants plan, recommend, purchase, and install better lighting; and that they will benefit from the centralized information service.

Lighting and utilities men are invited by the committee to obtain competition blanks and rules from the Exposition and Conference headquarters at 326 West Madison St., Chicago, Ill.

Mobilization News Items

Defense Act Extension. At the end of June, Congress, unable to agree on the details of a 1951 Defense Act, passed a compromise bill that extended the 1950 Defense Act through July 31, 1951. As a result, manufacturers regulation CPR 22, and the cotton yarn and fabric ceiling-price regulation CPR 37, scheduled to take effect July 2, 1951, under the new Act, did not officially become effective on that date or at any time during July. Manufacturers who had not already filed their Form 8 under CPR 22 were thus given another extension of at least a month, with the promise of no price rollbacks effective in July. Congress, by the first of August, is expected to pass the new Act, some details of which will appear in this section in the September issue of TEXTILE WORLD for the further information of our readers.

Quartermaster Requirements. Public invitations to bid on 6,300,000 yd. of 16-oz. OD-33 serge for the Army, including the last QM procurement of all-worsted serge before 16-oz. worsted-nylon blend cloth becomes standard, have been issued for the new fiscal year that started July 1. Half of the yardage will be all-worsted for September-October delivery and half will be the worsted-nylon type for delivery in November-December. The latter is the first actual procurement of the blended cloth. Mills with contracts for traditional 18-oz. OD-33 all-worsted serge have been experimenting with the lighter-weight blend for several months. The changeover to blended fabric will reduce Army serge-wool requirements about 25%.

High-Tenacity Rayon Amendment. An amendment to NPA Order M-2 (Rubber) has been enacted to prevent the increased use of high-tenacity rayon in the production of rubber products for non-defense purposes. The action restricts consumption, starting the third quarter, to the average quarterly use during the first half of 1950. The amendment seeks to maintain the present ratio of rayon and cotton use and to prevent the greater use of high-tenacity rayon, which is in short supply.

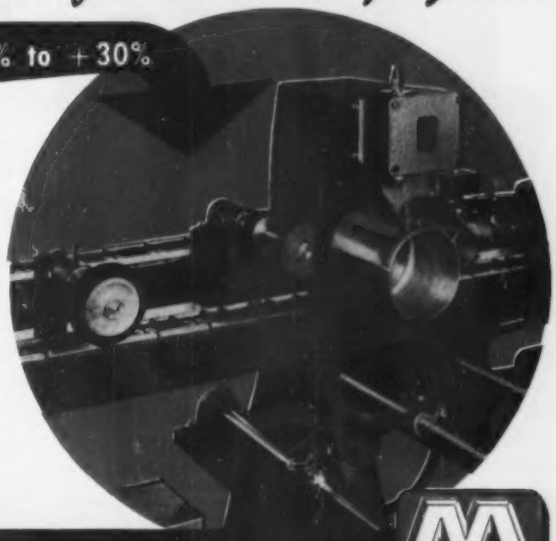
Get Rid of That Scrap. *Scrap for Steel for Defense*, a NPA booklet that seeks through wide distribution to seek out dormant iron and steel scrap and place it back into normal channels as quickly as possible, has been issued by the Dept. of Commerce, Washington 25, D. C. It is estimated that 32,500,000 gross tons of purchased scrap will be required this year, an increase of 3,000,000 gross tons over 1950. Questions and answers on scrap in general, and how to dispose of it, are given in the booklet for the information of those interested.

Textile Materials Classified. *List of Basic Materials and Alternates*, a four-page pamphlet, has been prepared by NPA for the easy determination of the availability of about 550 items. Textilewise, listed as *in very short supply* are cotton duck, cotton webbing, feathers and down, silk noils, and silk waste. *In tight supply* are abaca, filament and staple acetate, combed and wind-resistant cotton goods, cotton tire cord, cotton yarn, cotton card fabric, glass fiber and yarn, filament and staple nylon, high-tenacity rayon, sisal, viscose filament yarn and staple, and new and reprocessed wool. *In fair supply* are listed coir yarn, other cotton goods, flax, jute, other silk types, and reused wool.

CMP Allotment Accounting. The record-keeping to be required of manufacturers and others operating under the Controlled Materials Plan is set forth in a booklet, *Allotment Accounting for Consumers Under CMP*, issued by NPA. The manual explains what records are to be established and maintained to account for allotments of metals that are in very short supply (steel, copper, aluminum). The form that the records are to take, other than their accuracy, is left in the jurisdiction of the individual company executive responsible for the keeping of the information.

*M&W Positive Overfeed and Selvage Guider

Uniform Overfeed from −5% to +30%



Regulates overfeeding positively and uniformly from −5% to +30% — for all fabrics, any finish, at speeds up to 100 yds. per minute. Simple — a turn of the wheel changes amount of overfeeding.

Pinning of each selvage on the tenter chain is adjustable, can be held within 1/16" tolerance.

Photo-electric cell engages selvage, *instantaneously* corrects sidewise variations — adjustable to react with equal efficiency to *all* shades and weights of fabric.

Guider arm brings cloth to meet the rails, not rails to meet the cloth — gains speed and accuracy by moving ounces of aluminum instead of hundreds of pounds of cast iron.

Manufactured exclusively in the U.S.A. under license from John Dalglish & Sons Limited of Thornliebank, Glasgow, Scotland.

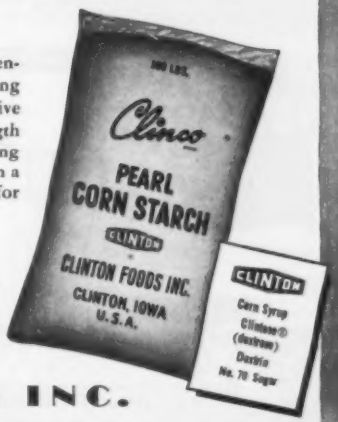
*Attaches to practically all existing tenter frames (when equipped with M&W pin type tenter chains), easily transferred from one frame to another.

SEND FOR BULLETIN GIVING FULL DESCRIPTION

M&W

You'll find CLINTON Quality Starches tops for every textile purpose!

CLINTON Textile Starches are scientifically manufactured with unvarying uniformity assured. Clinton Starches give your warp the necessary body, strength and pliability that means quality weaving every time. For years Clinton has been a leader in the production of starches for all textile purposes.



CLINTON

CLINTON FOODS INC.
CLINTON, IOWA

CONTACT: R. C. Rau, S.E. Mgr., 161 Spring St. Bldg., Atlanta, Ga., Tel WAlnut 8998
Boyce L. Estes, 343 Mimosa Dr., Decatur, Ga.
Grady Gilbert, Box 342, Concord, N. C. Frank Rogers, 900 Woodside Bldg., Greenville, S. C.

For 25 years . . . 5 weeks of sunshine every day!

In January of 1924, General Aniline & Film Corporation purchased its first Atlas Fade-Ometer for use in the company's research laboratory as the means for testing the lightfastness of General Aniline dyestuffs under accelerated conditions. In 1949 this same machine—after 25 years of dependable use—was turned in to us on the purchase of a new machine which immediately took its place alongside the many other Fade-Ometers bought by General Aniline (The Model FDA pictured above was purchased in 1940) during the intervening years.

By subjecting product samples to Fade-Ometer testing, General Aniline technicians can accurately foretell how dyed materials will wear and look in any climate and however used. Thus, the General Aniline reputation for quality is carefully protected at all times.

* * *

The source of light in the Fade-Ometer in the photo is still as reliable as it was on the day the machine was delivered, and is still the most accurate reproduction of Noon June sunlight ever devised.

Throughout the years, however, Atlas has maintained its own research program dedicated to improving the entire line of Atlas-Ometers—the Fade-Ometer, Weather-Ometer, and Launder-Ometer. The result has been machines that are simpler to operate, faster in providing results, more economical, and as always—thoroughly reliable.

ATLAS ELECTRIC DEVICES COMPANY

361 W. Superior St., Chicago 10, Illinois

Manufacturers of accelerated testing devices for more than a quarter of a century

NEWS ABOUT Suppliers

Equipment Suppliers

Bullard Clark Co., E. H. Jacobs Northern Div., Danielson, Conn., and Charlotte, N. C., has appointed William E. Lundgren to its staff. He will devote his energies to new and improved loom accessories. In the textile field for over 30 years, Mr. Lundgren was most recently with Whitin Machine Works.

Crescent Corp., Spartanburg, S. C., recently opened its new Southern headquarters, covering more than 75,000 sq. ft. of floor space and costing $300,000 to construct. James A. Connell, Crescent Southern manager since he started with the firm in 1936, is in charge of the new facilities.

William Crabb & Co., Black Mountain, N. C., has named Wesley E. Vaughn of Asheville, N. C., to travel the Southern states for the company. William E. MacPherson of Ashville has been assigned the Midwestern and Canadian territories.

H & B American Machine Co., Atlanta, Ga., recently announced the retirement of Alex King, who first went to work with H & B in 1908.

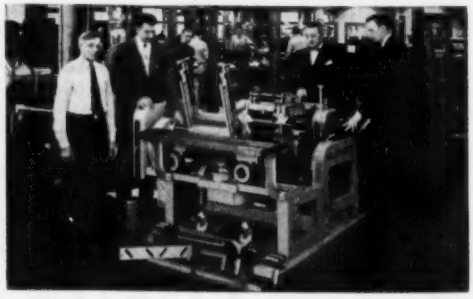
James Hunter Machine Co., North Adams, Mass., has opened a Southern plant in Greenville, S. C., to handle engineering and sales-service in the area for both Hunter and Thomas Leyland Machinery Co. equipment. Ralph C. Wing is manager.

The Kuljian Corp., Philadelphia, Pa., has named Robert M. Lundgren vice president in charge of the sales program. He had been with Westinghouse International as a project and testing engineer on foreign power developments. Harry A. Kuljian, head of the firm, has established two $500 annual scholarships in the humanities for seniors at Massachusetts Institute of Technology.

Lamson Corp., Syracuse, N. Y., has prepared a 2-reel talking movie that gives typical endless- and roller-type conveyor applications in several industries. Mount Hope Finishing Co., U. S. Rubber Co., and Westinghouse Electric Corp. are among the firms serving the textile field whose installations are included in the film.

Meadows Mfg. Co., Atlanta, Ga., recently celebrated its 20th anniversary with the opening of a new general machine shop that gives the modernizing firm 30,000 additional sq. ft. of floor space.

National Ring Traveler Co., Pawtucket, R. I., recently named H. Haley Ector to its

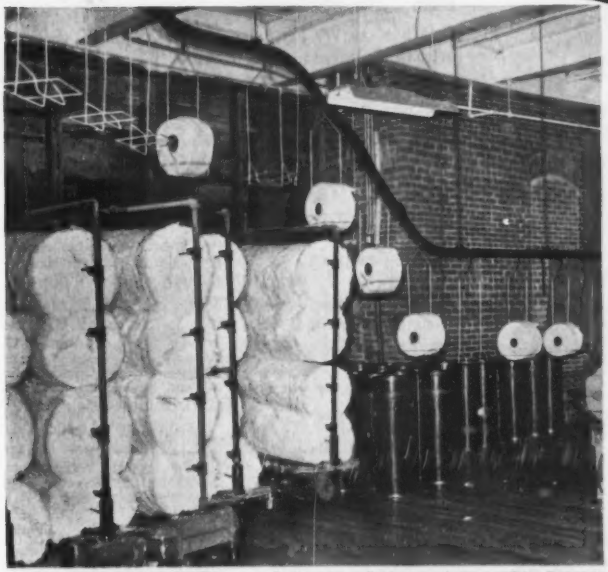


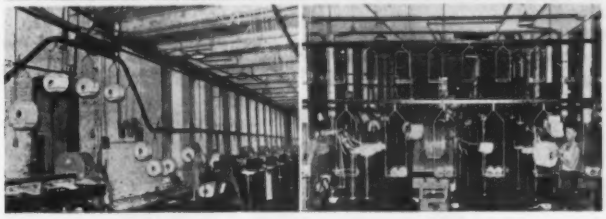
5,000TH HOLDSWORTH GILL BOX with balling head was recently shipped by Holdsworth Gill Screw Co., in conjunction with ceremonies marking the formal opening of the company's new Pawtucket, R. I., plant.

How to cut Textile Mill overhead!

Reduce Materials Handling to a Minimum with . . .

R-W "Zig-Zag" Continuous Power Conveyors





Many leading textile mills have discovered that the best way to reduce overhead, and cut materials handling costs to a minimum, is to install a Zig-Zag Conveyor system by Richards-Wilcox. ZIG-ZAG swiftly solves handling problems, and quickly puts production and processing lines on a more efficient basis—effects immediate savings in overhead, and releases skilled workers for *other* important jobs in your plant. As shown above, ZIG-ZAG keeps things moving, curving in and around . . . up and down . . . in the most confined or crowded areas.

ENGINEERED FOR ECONOMY AND FLEXIBILITY

- Horizontal and vertical units alternate in a continuous chain traveling through special steel tubing.
- SAFE—all moving parts fully enclosed.
- Complete flexibility for installation in any plant. Easily installed, easily changed to conform to plant alterations.
- Low first costs. Low Power Factor.
- Standard horizontal or vertical curves—two-foot radius.

Find out right now how you can put your plant on a more productive, more efficient basis—and effect substantial savings in materials handling costs—with the revolutionary ZIG-ZAG Continuous Power Conveyor system designed and engineered by Richards-Wilcox. Write our nearest office today about an early consultation. No obligation on your part.

RICHARDS WILCOX R-W AURORA TRADE MARK Reg. U.S. Pat. Off.

1880 1951

OVER 71 YEARS

Richards-Wilcox Mfg. Co.

"A HANGER FOR ANY DOOR THAT SLIDES"

AURORA, ILLINOIS, U.S.A. *Branches in all principal cities*

SLIDING DOOR HANGERS & TRACK • FIRE DOORS & FIXTURES • GARAGE DOORS & EQUIPMENT
INDUSTRIAL CONVEYORS & CRANES • SCHOOL WARDROBES & PARTITIONS
ELEVATOR DOOR OPERATING EQUIPMENT

Descriptive literature on request

The Hayssen wraps a great variety of products . . . is fully automatic . . . has a long operating life because it is mechanically simple . . . and functions quietly at a high production rate. Low in initial cost, it keeps the unit-cost of wrapping at a low level. Printed wraps are registered by Hayssen Electric Eye.

HAYSSEN MFG. COMPANY
SHEBOYGAN, WIS.

News About SUPPLIERS (Continued)

DONALD H. McIVER has been elected to the office of vice president in charge of industrial sales of Ex-Cell-O Corp., Detroit, Mich. With the company since 1929, he has been sales manager of the industrial division since 1949.

MYRON T. FLEMING, sales manager of Proctor & Schwartz, Inc., Philadelphia, Pa., since early 1950, has been made vice president in charge of sales and engineering for the dryer division. He succeeds George W. O'Keeffe, who died last February.

Southern sales force. He is covering Alabama, western Tennessee, and Mississippi from West Point, Ga.

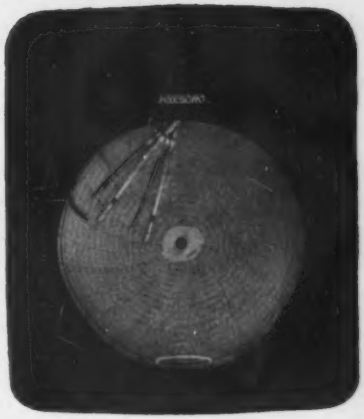
Reliance Electric & Engineering Co., Cleveland, Ohio, has added Daniel J. Donnelly in a sales-engineering capacity to its Philadelphia, Pa., office. He has been with the firm since February, 1950.

Scott Testers, Inc., Providence, R. I., has elected as president David C. Scott, Jr., who also continues as sales manager. James M. Scott continues as treasurer and production manager. Diana Scott Worthington has become secretary. William G. Ahlson is now assistant treasurer.

Smith, Drum & Co., Philadelphia, Pa., following the death of former president Parker M. Smith, has elected the following officers: Harry S. Drum, president; Robert N. Smith, vice president and treasurer in charge of sales and administration; and John P. G. Patton, vice president and secretary in charge of manufacturing and engineering. William C. Dodson has been appointed special assistant to the president. The company has appointed Parrott & Ballentine, Greenville, S. C., its sales agent for the Southern states.

Textile Machine Works, Reading, Pa., recently appointed Emerson A. Shoemaker sales manager of the knitting-machine division. With the company sales staff for 25 years, Mr. Shoemaker succeeds Ray-

A. P. HYDE (left) has been appointed sales engineer in North Carolina, Virginia, and Tennessee for Rodney Hunt Machine Co., Orange, Mass., and Charlotte, N. C. T. W. Kitchen continues to represent the firm in South Carolina, Georgia, and Alabama. LAWRENCE B. HUNT (right) has succeeded L. M. Phillips as sales engineer in New England and New York State. Mr. Phillips has assumed an administrative position at Orange.



WET AND DRY BULB INSTRUMENTS

These Foxboro instruments give separate wet and dry bulb records on the same chart . . . in dry bulb ranges from 32°F. to 212°F. They are exceptionally accurate and stable. Bulbs can be placed up to 200 feet from the instrument. Available as recorders, or air operated (Model 40) and electric (Rotax) controllers, including multi-zone and time-humidity controllers.

DIRECT-READING DEW POINT INSTRUMENTS

Foxboro recently introduced the first simple, continuous dew point measuring instruments for industrial use. Their patented humidity sensitive element, the "Dewcel", requires no water box or moving air. Accuracy is unimpaired by dust or lint. Foxboro recording and controlling instruments, used with the "Dewcel", give direct readings from —20°F. to 160°F. dewpoint, at dry bulb temperatures up to 220°F. Readings easily converted to absolute or relative humidity. Foxboro instruments for dew point include liquid expansion type and electronic type recorders and controllers . . . with either pneumatic or electric control action. The Multi-Record Dynalog* for dew point provides up to 6 records on a single round chart.

*Reg. U. S. Pat. Off.

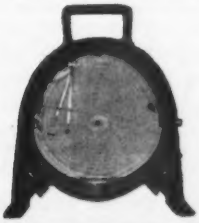
better measurement and control of humidity

DIRECT-READING RELATIVE HUMIDITY INSTRUMENTS

Direct-reading relative humidity instruments, in both hair and membrane (gold-beater's skin) types. Sensitive, accurate and reliable.

These Foxboro hygroscopic instruments are designed to operate in temperatures up to 140°F. They are available for recording (including the portable model shown here), and controlling (pneumatic M-40, or electric *Rotax*, operated).

Combination temperature and relative humidity recorders (0—100°F and 0—100°R.H.) are shipped from stock.



Ever since it introduced the first successful long-distance wet-and-dry bulb psychrometer, Foxboro has pioneered in the development of new and improved methods for the measurement and control of humidity.

In its knowledge of textile process requirements, and its complete line of better-engineered instruments, there's more than likely the ideal solution to your own problem.

Why not write for complete information, or talk it over with a Foxboro Engineer, now? **The Foxboro Company, 488 Neponset Ave., Foxboro, Mass., U. S. A.**

FOXBORO HUMIDITY INSTRUMENTS

REG. U. S. PAT. OFF.

FACTORIES IN THE UNITED STATES, CANADA AND ENGLAND

Meeting the Test of Actual Mill Operation

THE NEW SIPP-EASTWOOD ELECTRICALLY CONTROLLED HIGH SPEED WARPER

—the speed of the machine is limited only by the yarn in mills where only the most efficient equipment is tolerated. It builds beams up to 36 inches in diameter, 54¼ inches or wider between heads, with practically no vibration because of smoothly applied power and extra heavy construction.

FEATURES THAT ARE OUTSTANDING:

1. Stepless automatic electrical control of warp speed 1% maximum variation.
2. Electrical indication of speed at all times.
3. Finger-tip controls throughout.
4. Static eliminator.
5. Motor-mounted magnetic disc brake.
6. Magnetically operated hydraulic brakes for auxiliary braking of beam, measuring roll and pressure roll, and to hold the beam at a standstill.
7. Separate hydraulic system for handling beams in and out.
8. AC power only required.

Ask for all the facts about this splendid warper.

SIPP-EASTWOOD CORPORATION
47 Keen Street Paterson, New Jersey

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S. FRED TOLL
2716 W. Morehead Street
Charlotte 1, N. C.

J. S. FALLOW & CO.
New Bedford, Mass.

News About SUPPLIERS (Continued)

mond W. Weaver, now manager of the new knitting-machine division.

Trumbull Electric, Department of General Electric Co., Plainville, Conn., has named Douglas J. Donohue Atlantic-district sales manager. A salesman for the Eastern territory since 1945, Mr. Donohue has his office in Philadelphia, Pa.

Warner Electric Brake & Clutch Co., Beloit, Wis., has transferred James A. Mason, chief project engineer, to Machinery Electrification, Inc., Worcester, Mass., the New England outlet for the company. His new position is that of assistant manager.

Chemical and Yarn Suppliers

Armour & Co., Chicago Ill., has appointed W. E. Langford general sales manager, located in Chicago, to succeed T. M. Galvin, retired. Mr. Langford had been assistant sales manager and regional supervisor of the Atlantic-seaboard territory since 1948.

Chemstrand Corp., Philadelphia, Pa., is to start construction soon on its 50,000,000-lb.-annual-capacity nylon-yarn plant [TW, July, '51, p. 234] on a 2,000-acre tract on the Escambia River, about 12 miles north of downtown Pensacola, Fla. The plant will employ between 3,000 and 4,000 persons, including from 200 to 300 technicians.

Ciba Co., Inc., New York, has announced the retirement of Walter F. Lauer, for 30 years a Ciba representative in the New York metropolitan area.

E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., recently set up separate organizations to handle the manufacturing activities and sales of acetate rayon and Orlon acrylic fiber in the Acetate Division. Thomas H. Urmston is in charge of acetate rayon operations. J. N. Tilley heads the activities for Orlon acrylic fiber. Henry C. Froehling has become director of acetate-rayon sales. George S. Demme is director of sales for Orlon. A. J. Smith, Jr., has become assistant director of sales for Dacron polyester fiber. Toyo Rayon Co. Ltd., Tokyo, Japan, has been licensed to manufacture nylon in Japan under Du Pont patents, under the trade-mark of Amilan.

Owens-Corning Fiberglas Corp., Toledo, Ohio, has been appointed Owen C. Divan service manager of the new Fiberglas yarn plant at Anderson, S. C. His former position of service manager of the textile-products division has been filled by David W. Anderson, who had previously been assistant service manager of the division in New York.

WILLIAM A. PARKER, president of Incorporated Investors, Boston, Mass., was recently elected chairman of the board of directors and chairman of the executive committee of Rayonier, Inc., New York. He has been a director of the cellulose-producing firm since 1946.

Heyden Chemical Corp., New York, has started construction on a new plant at its Fords, N. J., division that will double company capacity in acid products used in chrome khaki dyes and pigments required by the Army and increased civilian use.

Libbey-Owens-Ford Glass Co., Toledo, Ohio, recently made J. Gilbert Mohr quality-control manager of the new fiber-glass division at Parkersburg, W. Va. He was previously in the research division of the company at Toledo.

Monsanto Chemical Corp., Merrimac Div., Everett, Mass., has appointed John W. Harrison to a position in its tex-

there's plenty in this SLEEVE

The new Fairbanks-Morse Pomona external sleeve bearing assembly gives you *plenty* of advantages in efficient, economical deep-well turbine pump performance.

This important advance in turbine pump bearing design assures maximum life of the bearing assembly without any sacrifice in line shaft streamlining and bowl efficiencies. The full-floating, spiral groove, rubber bearing assures efficient water lubrication. Bearing grooves provide continuous flow from end to end of the bearing . . . a positive flushing action that eliminates any possibility of destructive sand particles traveling across the full face of the bearing.

There is no chance for liquid entry between shaft and sleeve bearing. Friction and shaft bearing losses are reduced to **the minimum. Worn sleeves can be easily and inexpensively replaced in the field.**

This advanced development, plus the many other Pomona advantages, adds up to maximum efficiency . . . lowest operating and maintenance costs. Your **branch pump engineer or Fairbanks-Morse Pomona Pump dealer will be** happy to give you the complete story. Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago 5, Ill.

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PUMPS • SCALES • ELECTRIC MOTORS • GENERATORS
LIGHT PLANTS • DIESEL, DUAL FUEL AND GASOLINE ENGINES

how to prevent spoilage...

...THE *Versenes**

VERSENES* CONTROL QUALITY

In Wet Processing and Finishing the Versenes can prevent spoilage of goods in these ways:

They completely and permanently soften hardest water without precipitation.

- ...prevent the formation and deposition of insoluble soaps on textile fibers
- ...remove insolubles *after* they have been deposited
- ...assure cleaner fibers, deeper dye penetration, level dyeing
- ...improve cleaning and foaming action of synthetic detergents
- ...prevent and/or remove iron stains in any caustic solution
- ...inactivate and prevent contamination from either divalent or trivalent metals
- ...dissolve natural greases, oils and proteins
- ...prevent oxidation of fats, oils, soaps, fatty acids, organic materials
- ...give exacting chemical control over cations in solution.

All of these things are vitally important to the control of quality and the prevention of spoilage in textiles.

VERSENES*—NEW SOLUTIONS TO OLD PROBLEMS

The four Versenes used in textile processing are powerful organic chelating (complexing) agents. Chemically, they are the sodium salts of ethylene diamine tetra acetic acid and other polyamino acids. Versene (regular) is the most efficient general complexing agent and water softener. *Versene* Fe-3 prevents hard water deposits and iron stains. *Versene* Fe-3 Specific is the most powerful iron complexing agent known in the normal pH range. *Versene T* prevents and removes iron deposits from fabric treated with concentrated caustic. Available in liquid form, Versene T, like all Versenes, remains stable at high temperature and pH. Ask for sample and Technical Bulletin No. 2. Write Dept. D.

NEW VERSENE WATER TEST KIT. Tells total hardness in 2 minutes. Accurate to one grain per gallon. Versenate Method. Complete Kit $5 postpaid.

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Berado & Page, Inc., Dallas and Houston, Texas
Associated Chemical Co. of Canada, 14 Darrell Ave., Toronto, Ontario
Southern Agent: Chas. S. Tanner Co., Liberty Life Bldg., Charlotte, N. C.

News About SUPPLIERS (Continued)

tile laboratories. Mr. Harrison was formerly assistant to the research and quality-control director at Bates Mfg. Co., Lewiston, Me. Howard A. Gray, former administrative assistant in the research department at Everett, has been appointed group leader in the laboratory.

Morningstar, Nicol, Inc., New York, N. Y., this year is celebrating the 100th anniversary of its founding.

Roxbury Chemical Co. Ltd., Granby, Que., has been opened as a division of Atlantic Chemical Co., Inc., Centerdale, R. I., as a means of serving better the company's Canadian customers.

Warwick Chemical Corp., Div. of Sun Chemical Corp., Long Island City, N. Y., has named Donald D. Gagliardi director of product development. From 1946 to 1951, Mr. Gagliardi was a section leader at Rohm & Haas Co. central research laboratories.

Wyandotte Chemicals Corp., Wyandotte, Mich., recently appointed Henry C. Speel director of the development department. Formerly with General Dyestuffs Corp., Mr. Speel will direct market development and technical service for new Wyandotte organic products.

O. F. Zurn Co., Philadelphia, Pa., has added Robert T. English to its sales staff. He is to cover the company's Midwestern territory, which includes Wisconsin, Michigan, Illinois, Indiana, and parts of Ohio and Minnesota.

Other Services

AATCC, New York, has increased its annual budget for research to $60,000. Additional equipment and research personnel will be added at the association laboratory at Lowell Textile Institute, Lowell, Mass. Exhibition space at the national convention at the Hotel Statler in New York in October, the largest the association has ever contracted for, is almost completely sold out.

The Birmingham Committee of 100, Birmingham, Ala., has launched a $600,000 five-year national promotional campaign to bring new industries, sales offices, and warehouses into the Birmingham area.

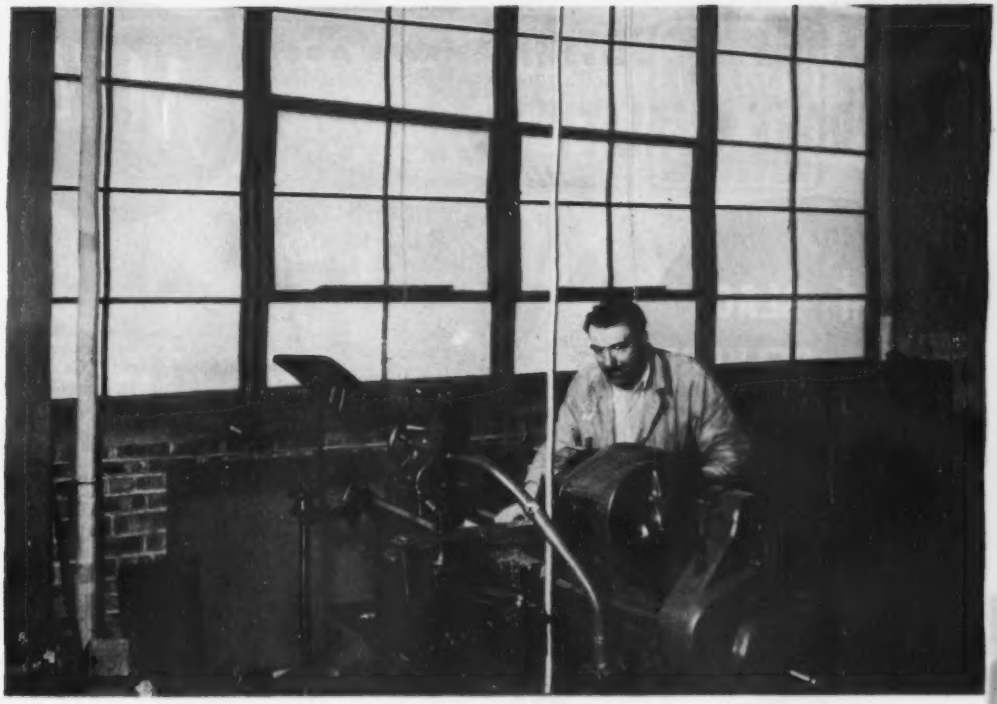
The National Cotton Council, Memphis, Tenn., stated last month that in the last 11 years cotton consumption in 55 major uses increased 2,026,080 bales, a gain of 61.2%. In 20 of these markets, the use of cotton has more than trebled. Drapery and upholstery fabrics and curtains consumed 167,580 more bales in 1950 than in 1939, topping all users in bales consumed. Cotton rugs were second in total bales consumed and first in percentage of increase, gaining 150,610 bales and 916.7%.

New England Textile Foundation, Providence, R. I., has awarded 41 scholarships for the 1951-52 scholastic year. Eight are for students at Bradford Durfee Technical Institute, Fall River, Mass.; 21 for students at Lowell Textile Institute, Lowell, Mass.; two for students at New Bedford Textile Institute, New Bedford, Mass.; and 10 for students at the Textile School, R. I. School of Design, Providence, R. I.

South Carolina Textile Mfrs. Assn., Columbia, S. C., is the new name of the State trade association formerly known as the South Carolina Cotton Mfrs. Assn.

Textile Research Institute, Princeton, N. J., has been incorporated in the State of New Jersey as an "institution of learning," succeeding Textile Research Institute, Inc., of New York. Membership of the two boards of directors is the same. Appointment of six men to research fellowships for the forthcoming academic year brings up to 16 the number of research fellows at TRI, the maximum number contemplated under present operational plans.

The Wool Bureau, Inc., New York, recently named Douglas T. Boyd of New South Wales, Australia, chairman of the board of directors. He succeeds Harry J. Devereaux of Rapid City, S. D. F. Eugene Ackerman, president of the Bureau; Mr. Devereaux; and J. Byron Wilson, McKinley, Wyo., were re-elected American directors.



Best light for precision work

FILTERED DAYLIGHT

Close tolerances — fast-moving machinery — shiny metals — work that requires critical seeing . . . call for a flood of soft light, with a minimum of glare.

Provide workers with smoothly diffused daylight — filtered through Frosted *Aklo*® Glass. This blue-green glass cuts down glare. It's pleasing to the eyes — much like the color of sun-glasses.

Aklo Glass excludes three times as much sun heat as ordinary glass. It soaks up sun heat — up to 70% — and reradiates half of it back outdoors. Result . . . cooler interiors. People can work comfortably near large windows in hot weather. Less load on air-conditioning equipment. Less spoilage of materials.

As you see new plants springing up around the country, note how many are glazed with blue-green heat absorbing glass on the south, east and west elevations. They're planned for better seeing — better working conditions — better *production*.

See for yourself how Frosted *Aklo* Glass reduces glare and sun heat. Ask your Libbey-Owens-Ford Glass Distributor for a Radiometer demonstration of its effectiveness. Or mail the coupon. ®

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***AKLO* GLASS**

FREE BOOK on Reduction of Sun Glare and Heat

Blue Ridge Sales Div., Libbey-Owens-Ford Glass Co.
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☐ Please send me your book "Filtered Daylight".
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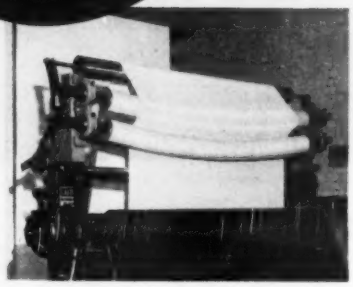
You can

INCREASE PRODUCTION

IMPROVE QUALITY

with

Mount Hope SLACK SELVAGE ELIMINATOR



Installation of Mount Hope Slack Selvage Eliminator on Shearing Machine. Courtesy of Woodside Mills, Greenville, S. C.

Cloth Room Men Report:

"Eliminates cut selvages on shearing machines—controls selvage slack."

Avoid costly slowdowns and spoilage due to wrinkles and slack selvages — speed up *your* cloth room operation.

Have a Mount Hope Engineer analyze *your* cloth handling problems — no obligation.

ANOTHER Mount Hope CLOTH HANDLING DEVICE

ASK FOR BULLETIN SSE TODAY

MOUNT HOPE MACHINERY COMPANY

15 FIFTH STREET • TAUNTON • MASSACHUSETTS

240 For more information, write direct or use Reader Service post card.

NEWS ABOUT Mills

Cotton Mills

Arkwright Mills Corp., Arkwright, S. C., has recently extended and improved existing buildings in the Camp Croft area near Spartanburg and installed 18,000 spindles with complementary equipment for spinning carded yarns. Operations have begun in the new plant.

Beaumont Mills, a division of Spartan Mills, Spartanburg, S. C., has again been geared to defense production through a machinery-installation and -replacement program totaling several hundred thousand dollars. The program included installation of 57 new 54-in. Draper X-2 looms. Addition of 97 F-model looms for production of duck and installation of 126 modified D-model looms, 60 in. and 84-in. wide, are now under way.

Bernside Mills, Gastonia, N. C., spinning plant, has been revamped and rebuilt. The plant has purchased additional cards so that it is now operating with 48 cards, 16 combers, and 25,000 spinning spindles, plus about 7,500 twisting spindles. Winding equipment has been rebuilt and brought up to date with the addition of new coners. Fluorescent lighting has been installed throughout the mill.

Canadian Cottons Ltd., is now constructing a new addition to its Canada Mill, Cornwall, Ont. With new dyeing and finishing equipment, the expansion will cost approximately $1,500,000. The new 280x123-ft. addition, two stories in height, is to be of brick construction and windowless. Lockwood Greene Engineers, Inc., Boston, Mass., has been engaged as design engineer for buildings, services, and machinery layouts.

Chesnee Mills, Chesnee, S. C., has completed a $1,000,000 improvement program that included building improvements and new machinery. A 5,000-sq.ft. addition to the card room and a new testing laboratory were part of the program.

Clinchfield Mfg. Co., Marion, N. C., has let contract to McKoy-Helgerson Co., Greenville, S. C., for a proposed new addition to Mill No. 1.

Collyer Insulated Wire Co., Pawtucket, R. I., has let contract to Dolben & Co., Inc., Boston, Mass., for a one-story addition, about 200x200 ft., estimated to cost $100,000 exclusive of equipment.

Columbus Mfg. Co., Columbus, Ga., has awarded contract to Murphey-Pound Construction Co., Columbus, for a one-story addition to be used as a weave shed.

Dan River Mills, Inc., Danville, Va., has negotiated a $9,000,000 loan through a Boston concern to expand its working capital.

Dixie Duck Mill is being opened in Spartanburg, S. C., with 122 looms and six filling twisters. Mill will weave duck for U. S. armed forces and will employ approximately 129 workers. It is located in the building formerly occupied by Warrior Duck Mill.

Dominion Textile Co., Montreal, Quebec, plans to spend well in excess of $3,000,000 on expansion and modernization of its Merchants Mill in Montreal.

Laurel Hill Corp., Rutherfordton, N. C., has completed installation of its new Crompton & Knowles looms, which brings the total loom capacity to 192. An additional 52 looms will also be installed.

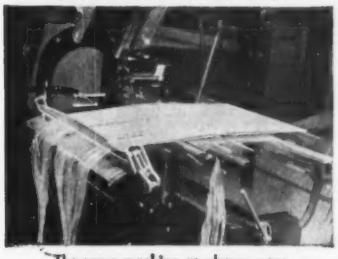
Morgan Cotton Mills, Inc., Laurel Hill, N. C., has let a contract to Fiske-Carter Construction Co., Spartanburg, S. C., for a one-story addition for expansion in the spinning department and for card-room improvements.

BARBER COLMAN

Reduce Costs!
Increase Production!
Improve Products!

TIES IN EITHER PLAIN OR LEASED WARP WITH EQUAL SPEED AND EFFICIENCY

Model "LL" machine set up for tying in a plain cotton warp.



The same machine as above, now set up for a leased cotton warp.

BARBER-COLMAN *Portable* WARP TYING MACHINE

A Barber-Colman PORTABLE Warp Tying Machine can be a *very profitable* investment for you. This machine offers a fast and accurate means for tying-in new warp *at the loom.* It can be handled in confined and hard-to-reach places and in loom alleys as narrow as 12". Overall production capacity averages 3500 to 4500 ends per hour, higher on high sley warps. Models are available to handle cotton, wool, worsted, silk, or synthetics (including monofilaments) and plain warps or leased warps or both. Tying is accurate and uniform and so much more efficient than common hand methods that the machine will pay for itself quickly in cost savings *even when not in constant use.*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

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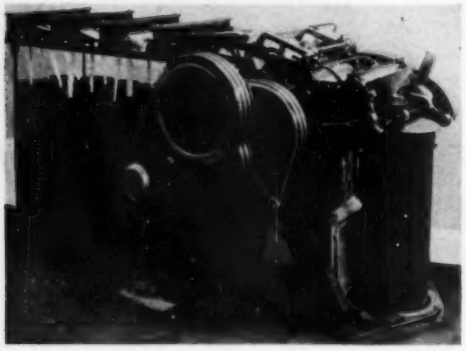
TEXTILE MACHINES S. P. A..

Isotta Fraschini

CONTINENTAL COMBING AND SPINNING MACHINERY

for

SYNTHETICS



COMB for Synthetic fibers

from 1" to 8" staple

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MODIFIED SWORD *to obtain a well-condensed, regular web*

FALSE TWIST DEVICE, *adjustable, to produce a firm sliver*

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MELANGE INTERSECTOR for perfect blends

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DRAWING AND SPINNING MACHINERY for long and medium staple synthetics—also for short synthetic waste

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News About SUPPLIERS (Continued)

Muscogee Mfg. Co., Columbus, Ga., has received a building permit for a $16,500 addition to its plant. It will be a two-story structure, measuring 30x25 ft.

New Braunfels Textile Mills, New Braunfels, Tex., has taken bids for a one-story addition to be used as a weave room. The building will be erected on a reinforced concrete foundation, with concrete exterior walls, tile interior walls, and a maple floor.

National Thread Ltd., Sherbrooke, Que., will be tenant of a mill to be erected at Sherbrooke by that municipality. The building will consist of two one-story units, 220x100 ft. and 60x60 ft. respectively, with walls of brick and concrete block.

Opelika Mfg. Co., Opelika, Ala., plans an expansion program to double the operation of its sewing room. Increase in production of plant and crowded working conditions necessitated the building program. New facilities in all will provide for operation of 30,000 spindles, 950 looms, and 200 sewing machines. Increase in carding, spinning, and weaving operations make it necessary to add a third floor to the newer wing of the mill to house the new sewing facilities.

Pacific Mills has recorded a deed to 520 acres of land about three miles north of Clover, Va. Pacific first took option on this land in 1948, and six months ago announced that it would buy the property. It is said that the company may construct a mill on this site.

Startex Mills, Tucapau, S. C., has completed installation of a floor-level roller-type conveyor system that operates from packing to shipping department. The company has also constructed an addition to its print-cloth mill and has begun installation of 22 new cards and 10 new Saco-Lowell model-FS2 10x5 roving frames. The new equipment will give the mill 48 individually driven cards. H & B spindles for warp spinning are also being added.

Tumbletwist Mills, Inc., Gray's Lake, Ill., has been purchased by a local group that plans to move the firm's entire production to Easley, S. C. Operations will be housed in existing buildings. The firm produces cotton carpetings.

Utica-Mohawk Cotton Mills, Utica, N. Y., is constructing a new plant between Clemson and Seneca, S. C., at a cost of $20,000,000. Steel work has been completed. The new plant is scheduled for completion this summer.

Wabasso Cotton Co. Ltd., Three Rivers, Que., plans to install additional machinery and equipment in its cotton-spinning and -weaving mill in Grand'Mere, Que. The company has also awarded a contract for erection of a $75,000 addition to its plant.

Woods Mfg. Co. Ltd., Welland, Ont., is to be modernized still further, with an estimated $2,000,000 to be spent over a two- to three-year period in improving production facilities. Orders have been placed for a large number of Swiss high-speed looms. Last year $520,901 was spent on purchase of equipment. The Welland mill produces a wide range of cotton goods.

Woolen and Worsted Mills

Abbott Worsted Co. has closed its mill at Graniteville, Mass. The company plans to take over and occupy mill property being vacated by Bachmann Uxbridge Worsted Co. in Lowell, Mass.

Bigelow-Sanford Carpet Co., Georgia Rug Mill, Summerville, Ga., has received a low bid from Johnson & Johnson Construction Co., Rome, Ga., at $442,764, for proposed extensions and improvements in the mill.

Felters Co., Boston, Mass., has installed a new multi-roll shrinking machine that was made in Italy. Installed cost of the unit was approximately $70,000. With this new machine, company plans to develop a new process in felt making.

Franklin Mills, Franklin,

THE COMPLETE SLASHER CONTROL

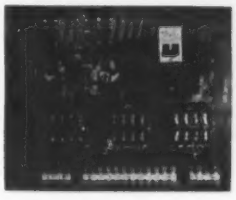
LEWELLEN

AUTOMATIC SLASHER DRIVE

• Think what these features will mean to you. 1—Slow starting speed of 1/15th of running speed. 2—Gradual acceleration to running speed. 3—Gradual de-celerating to slowest speed — stops at end of beam winding. No coasting. 4—Every speed change is gradual. No broken yarns. 5—Automatic return to last exact running speed and when speed is reached, circuits are engaged automatically to moisture control. 6—When slasher is stopped for any reason, slowest speed is reset so that slasher always starts at slowest speed. 7—All control functions in instant control of operator. 8—Transmission and controls designed as one unit. 9—Control cabinet can be located at any convenient point. 10—Any number of push buttons may be placed around slasher for quick accessability. 11—For use with either Brown or Barber-Coleman Moisture Controls. When moisture controls are not used, Lewellen controls are operated by push buttons.

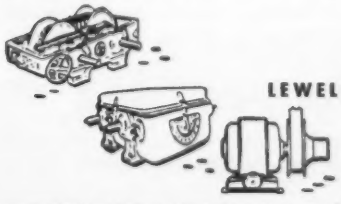
The Lewellen Transmission is completely enclosed with control meters, contactors, and all operating parts. Complete in one unit. Driven from present power motor. V-belt drives from power motor to transmission and from transmission variable shaft to slasher drive shaft.

Lewellen No. 12 class "F" Transmission with complete automatic slasher controls. Transmission is located under slasher and requires no additional floor space outside of slasher frame. Steel cover protects all interior parts. All parts lubricated while running, without removing cover.



The Control Cabinet encloses power motor starter, all control relays and terminal plates. It may be located at any convenient point near slasher.

The Lewellen Slasher Drive operates in the following manner:
When ends are on beam and ready, the start button is operated. This starts power motor and runs slasher at its slowest speed. When ready for running speed, run button is operated. The controls then gradually increase slasher speed up to its running speed. At this point the control automatically engages contacts to moisture control, if used. During winding operation, the moisture control, through the Lewellen controls, automatically adjust slasher speed as required to maintain uniform moisture. When a beam is finished, operator engages the slow button. This instantly disengages the circuits to moisture control and gradually reduces slasher speed to its slowest speed. The stop button is then operated, de-energizing power motor and stopping slasher. When slasher is ready to again start, operator engages start button, starting power motor and running slasher at its slowest speed. When ready, run button is again engaged and slasher gradually accelerates to its running speed. No matter how much the moisture control may have adjusted the speed on winding the last beam, the controls always return slasher to its last running speed, and at this point automatically engages control circuits to the moisture control. Where moisture control is not used, the control returns slasher to its last running speed and engages circuits to push buttons and speed is thereafter adjusted by the push buttons as required.



LEWELLEN MANUFACTURING CO., COLUMBUS, INDIANA

BARNES SERVICE *Consulting Engineers*
TO THE TEXTILE INDUSTRY FOR OVER ¼ CENTURY

Announces:

1. Opening of a NEW YORK OFFICE at 522 Fifth Avenue.
2. Inauguration of a new Methods and Materials Handling Division with headquarters in New York Office.
3. Appointment of David P. Canavan in charge of Methods and Materials Handling and the New York Office.
4. Expansion of BARNES EXECUTIVE SERVICE FOR TEXTILES
   Barnes men of wide executive experience are made available to mill management for short or long periods.

Inquiries are invited

Surveys—Reorganizations—New Plant Developments for Cotton, Wool, and Synthetic Yarn and Cloth Processing, Bleaching, Dyeing, Printing and Finishing.

★ Plant Appraisals ★ Mechanical and Operating Surveys – New Methods ★ Scheduling and Planning ★ Work Load Studies, Job Analysis and Evaluation, with Incentive Plans ★ Standard Cost Installations ★ Cost Control Methods

Laboratory Borden-meter Waste-meter

BARNES TEXTILE ASSOCIATES, Inc.

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For Maintained Shrinkage—
Perfect Finish—Long Life

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→COMPRESSIVE SHRINKAGE←
BLANKETS

for use in shrinking fabrics to the *"Sanforized"* standard by the Compressive Shrinkage process, are daily meeting the most exacting requirements of finishers throughout the industry. From the lightest and finest fabric to the heaviest denim, there is a special Huyck blanket to meet your specific needs.

Huyck blankets retain high shrinkage and finish properties to the last.

PALMER BLANKETS—also available for your special requirements.

Write for information or see our representative

F. C. HUYCK & SONS
KENWOOD MILLS
Rensselaer, N. Y.

News About MILLS (Continued)

N. H., a unit of M. T. Stevens & Sons Co., has a general program of improvement and modernization under way. Two 700-hp. boilers are being installed and are expected to be in operation this month. Enlargement of steam capacity will increase dyeing and finishing production from 700 to 1,600 pieces per week. Other improvements include a one-story structure, 129x29 ft., to Tilton plant. Spinning frames and cards, as well as improved facilities for handling materials like hydraulic hoists and chain and belt conveyors, will be installed in Tilton.

Halifax Worsted Mills, Halifax, Va., has broken ground for an addition that will add approximately 30% to the present floor space. The new unit will process scoured wool into wool top. Approximately 25 employees will be added.

Kenwood Mills, Arnprior, Ont., has had plans prepared for a further extension to its mills at Arnprior. The 150x45-ft. extension will be one-story.

Peeters Textile Mills Ltd., Granby, Que., is now producing Wilton carpets, cotton face-to-face rugs, and upholstery fabrics in its new plant. The plant, which is of brick and concrete construction and has 25,000 sq. ft. of floor space, is owned and operated by the Peeters family of Belgium, whose enterprises include the Peeters van Roye S. A., Peeters van Houten S. A., and Hosiery Elite.

Roby Worsted Ltd., Granby, Que., has installed additional machinery for production of woolen and worsted fabrics for men's and women's wear. The company has installed three additional Crompton & Knowles looms and one Davis & Furber warp compressor.

Stillwater Worsted Mills, Inc., Augusta Springs, Va., has been granted a permit by the Augusta County Board of Supervisors for additions and improvements to its plant. The mill has also been granted a permit for $4,000 worth of remodeling work.

Synthetic Mills

American Viscose Co., Parkersburg, W. Va., has let contract for structural-steel framing for a proposed addition to its local mill.

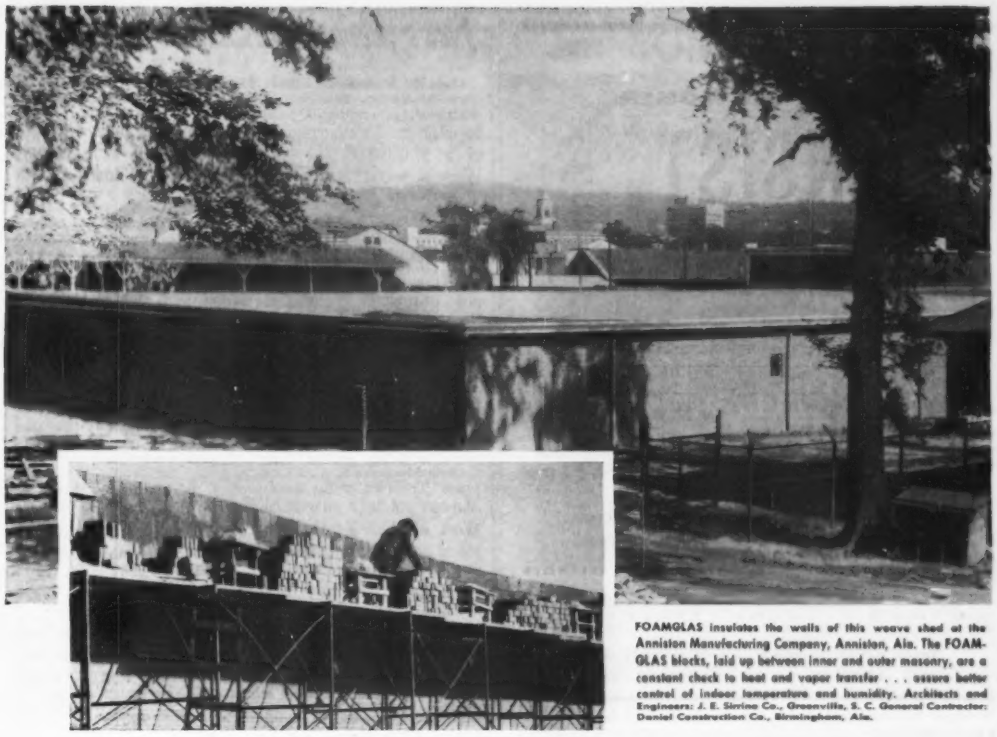
Beaunit Mills, Inc., New York, N. Y., plans to issue 100,000 shares of $5,000 cumulative preferred no-par-value stock. Proceeds from this stock, plus $15,000,000 raised from bank sources and $3,000,000 from other sources, will be used to finance construction of the Coosa Pines rayon tire-yarn plant and to increase working capital.

Bruck Silk Mills Ltd., Montreal, Que., is making general alterations to its building at Montreal to provide additional office space.

Burlington Mills Corp., Greensboro, N. C., announces additional gifts of machinery to technical departments of North Carolina State College at Raleigh, N. C., and Clemson, S. C. They are 600-hook jacquard head-machines for class-room study of manufacture and weaving of highly decorative and fancy-type fabrics. The company also has contributed a hosiery-knitting machine to each of the two colleges.

Consolidated Textile Mills, St. Hyacinthe, Que., is installing new machinery and equipment in its recently completed rayon-weaving mill in St. Hyacinthe. Cost of the building and additional machinery is approximately $750,000. The new one-story structure, 300x275 ft., provides approximately 80,000 sq. ft. of production space. When completed, the plant will house approximately 450 modern Draper and Crompton & Knowles automatic looms. New equipment will also be installed in the beaming and slashing departments.

Canadian Celanese Ltd., Drummondville, Que., has let contract for two one-story warehouses, to be adjacent to its plant in Drummondville. General contractor is Joseph A. Mercure Ltd., Drummondville. One building is to be 112x154 ft., with a steel frame; the other, 127x15 ft., will be built of concrete block construction.



FOAMGLAS insulates the walls of this weave shed at the Anniston Manufacturing Company, Anniston, Ala. The FOAMGLAS blocks, laid up between inner and outer masonry, are a constant check to heat and vapor transfer . . . assure better control of indoor temperature and humidity. Architects and Engineers: J. E. Sirrine Co., Greenville, S. C. General Contractor: Daniel Construction Co., Birmingham, Ala.

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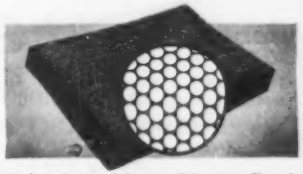

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News About MILLS (Continued)

Caracas, Venezuela – Francisco Matarrazo, Brazilian industrialist, is reportedly making plans for the establishment of a $7,000,000 mill here. Work is expected to begin on the structure in the near future.

Celanese Mexicana, Mexico City, Mex., Mexican subsidiary of Celanese Corp. of America, plans to triple its local production of viscose staple fiber. The company is currently adding a new section to its plant in Zacapu, where it expects to expand output from 6,000,000 to 8,000,000 lb. per year. Most new machinery is being shipped in from the United States, but some is being moved from Artisela Mexicana S. A., a local plant. The cost of the expansion has not been announced. Work is expected to be completed and the plant to be in operation by the end of the year.

Chemstrand Corp. will start construction of a new plant near Pensacola, Fla., within a few months. When completed, the new plant is expected to produce 50,000,000 lb. of nylon yarn annually. Approximately 4,000 persons will be employed. Chemstrand was recently licensed by Du Pont to produce nylon.

Columbia Cellulose Co. Ltd., Vancouver, B. C., plans further expansion of its plant at the former U. S. army base at Prince Rupert, B. C.

Deering, Milliken & Co., Inc., has begun operations on a limited scale at its new Kingsley Mill, Thomaston, Ga. The mill produces filament-rayon fabrics for women's dress goods.

Duplan Corp., Greensboro, N. C., has moved its Southern-division headquarters from Greensboro to Winston-Salem, N. C. The move, recently completed, puts personnel, purchasing, and engineering sections in the Winston-Salem Forsyth division and keeps the time-study unit in Hazelton, Pa.

E. I. du Pont de Nemours & Co., Inc., recently completed an expansion program at its nylon division in Chattanooga, Tenn. New spinning machines have been installed and new equipment has been added to the finishing department. Du Pont is also constructing a $12,000,000 office building near Newark, Del. About 2,000 persons, principally from the Du Pont and Nemours buildings in Wilmington, will occupy the new unit.

Granby Textiles Ltd., Granby, Que., has announced the change of its name to Sauquoit Ltd. Head office of the company is at 1260 University St., Montreal. Plant and sales offices are located at 185 St. Hubert St., Granby.

Luray Textile Corp., a subsidiary of Schwarzenbach Huber Co., Luray, Va., has completed a 7,500-sq.ft. addition to its main building.

J. B. Martin Co. Ltd., St. Johns, Que., with head office in Norwich, Conn., is having a 16x42-ft. one-story extension added to its office in St. Johns. Cost of brick structure is estimated at $6,000.

McMinnville Textiles, Inc., McMinnville, Tenn., has been incorporated with a capital stock of $250,000 to operate a new plant. Construction of the plant spinning unit is well under way.

Osage Mfg. Co., Bessemer City, N. C., is adding space for installation of approximately 160 looms, which will be operated on rayon suiting.

Strasburg Silk Mills, Inc., Strasburg, Va., has changed its name to Strasburg Textile Mills, Inc. The company no longer weaves silk.

Textron, Inc., Providence, R. I., stockholders recently approved an increase in authorized common stock from 2,000,000 to 3,000,000 shares and approved an incentive plan permitting key personnel to increase their holdings of common stock.

Textron Southern, Inc., plans construction of a multi-million dollar rayon-weaving plant at Williamston, S. C., the fifth major construction project by Textron in the Williamston area in the past three years. Textron is also reported to be planning a new rayon weaving mill on the Greenville-Anderson highway, six miles from Pelzer, S. C. The building will measure 510x 300 ft.

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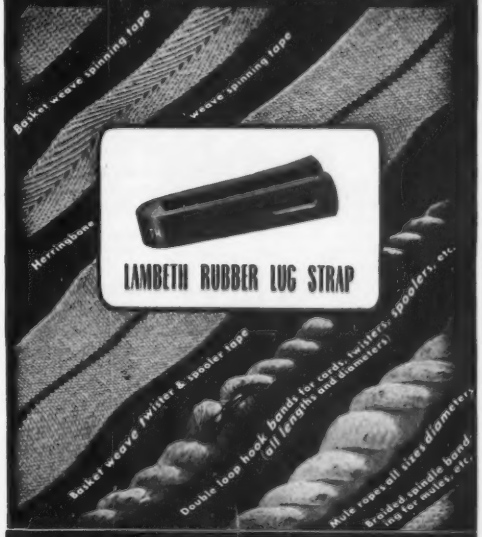
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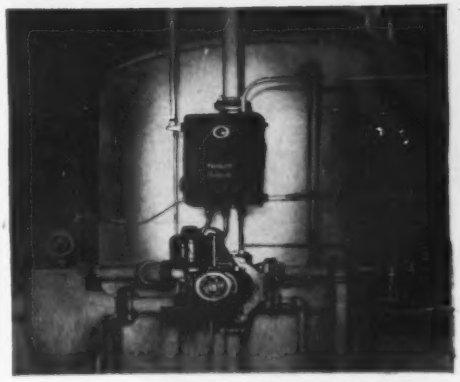

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Try anchoring your loom pads with Plasgon — many prominent mills do.

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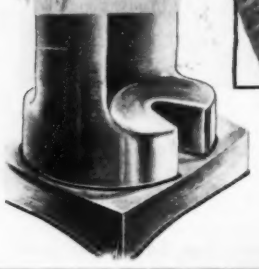

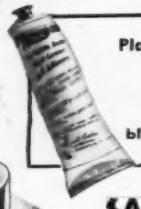

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News About MILLS (Continued)

Knitting Mills

Arteraft Hosiery Mills, Stroudsburg and Darby, Pa., has purchased Butler Hosiery Mills, Hartsville, S. C. The plant will continue to operate under the Butler name for a time. Production is 60-gage, 15-den. hosiery. Two new Kalio machines have been added, bringing the total to six. It is expected that six additional machines will be added at rate of about one a month. Reorganization plans are to be completed by October.

Bear Brand Hosiery Co., Chicago, Ill., recently opened a new mill at Siloam Springs, Ark. When in full operation, the plant will produce 2,500 doz. pr. of nylon socks for women and children daily. The company is planning to build two new plants in northwest Arkansas.

Beaunit Mills, Phoenix Div., Statesville, N. C., is discontinuing its knitting operations and will increase weaving. Knitting equipment is being transferred to the company plant at Beverly, N. J., to make room for additional looms at Statesville.

Belton Hosiery Mill, Belton, S. C., new plant, constructed by the Fairview Mills division of Julius Kayser & Co. at a cost of $1,500,000, has been completed.

Berkshire Knitting Mill, Andrews, N. C., has begun construction of a $2,500,000 plant. Completion is expected by next January.

Cherokee Hosiery Mills, Centre, Ala., has added 31 machines, more than doubling the capacity of plant. Approximately 60 persons will be needed to operate the enlarged plant.

Chopak Fabrics, Inc., Williamsport, Pa., has completed the third in a series of expansion programs. The expansion included doubling of manufacturing space; installation of 12 high-speed tricot machines, bringing total to 37; and addition of a second warper.

Elizabethton, Tenn.—Voters have overwhelmingly approved a $4,000,000 revenue bond issue to raise funds for a nylon-tricot knitting plant to be constructed in Elizabethton by Textron, Inc. An estimated 1,000 workers are expected to be employed.

Footlite Hosiery Mills, Inc., Zeeland, Mich., a subsidiary of Globe Knitting Works, has sold its machinery and equipment to Robert Berger of Philadelphia. Mr. Berger will operate the plant under the name of Footlite Co. and lease the real estate from Footlite Hosiery Mills, Inc. Globe will continue to sell part of the Footlite output under both the Footlite and Globe names.

P. H. Hanes Knitting Co. has received authority to construct additions and make alterations to its Mill No. 4 at Hanes, N. C. The project was temporarily postponed pending granting of steel priority. Involved are expansions in carding and spinning departments.

Mammouth Hosiery Mills, Inc., Iuka, Miss., has installed a pre-boarding department which enables the plant to do work formerly done in its Philadelphia plant.

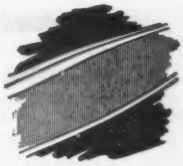
Roosevelt Mills, Inc., Manchester, Conn., has purchased stock and assets of Fuld & Hatch Knitting Co., Cohoes, N. Y. Principals of the Roosevelt group have merged the two companies and will use the Fuld-Hatch trade name for underwear. Manchester Knitting Mills Div. will continue to be used for outerwear.

Rockwood Mills, Monterey, Tenn., has completed plans for sale and removal of machinery at Monterey plant.

Sanson Hosiery Mills, Philadelphia, Pa., plans an addition to its plant at Corinth, Miss. Citizens of Corinth have voted in favor of a $60,000 bond issue to construct an addition to the city-owned plant, now occupied by Sanson Hosiery Mills.

Simplex Textiles Ltd., Prescott, Ont., is now carrying out an expansion program involving expenditure of approximately $50,000 in tricot-knitting machinery, dyeing equipment, and additional warehousing facilities. Work includes building of a one-story addition to the present plant to provide storage space.

Salvage Your Rusty Reeds The LOW-COST Oakite Way



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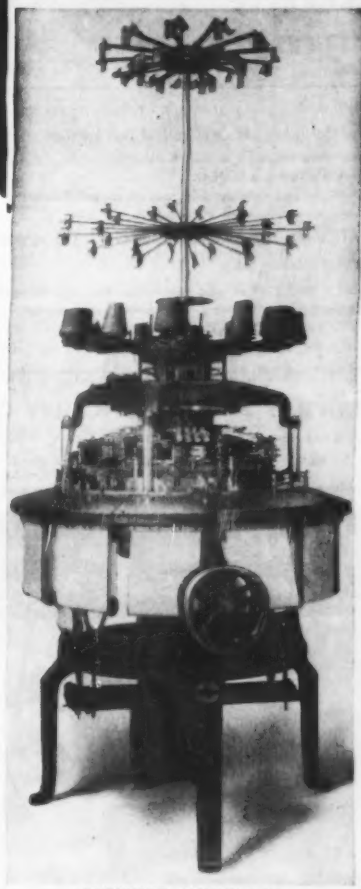

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"GOOD WARPS ARE MADE ON GOOD BEAMS"

News About MILLS (Continued)

Williamstown Hosiery Mills, Williamstown, N. J., has taken over the entire business and operation of Peter J. Stover Co. The firm produces hosiery in the gray on 45- and 51-gauge full-fashioned machines.

Wel-Wear Hosiery Mill, Oley, Pa., has been sold by Ray F. Hubler to Robert Berger of Philadelphia. Mr. Hubler will continue to buy and sell hosiery under Wel-Wear brand name.

Dyeing and Finishing Plants

American Thread Co. has completed work preliminary to construction of a finishing plant at Sevier, N. C. A spur line from Clinchfield Railway line is now being built to the plant site.

Franco-Canadian Dyers Ltd., St. Johns, Que., is now erecting a one-story extension, 30 x60 ft., for use as a warehouse addition.

Price Fire & Waterproofing Co., Poughkeepsie, N. Y., has been purchased by Charles F. Russell and Henry J. Franklyn, owners of Metrotex, Inc., Elizabeth, N. J. Additional machines will be installed at the Poughkeepsie plant to provide additional capacity for government work, which is supplementing present civilian work on waterproofing, dyeing, and finishing of cotton duck.

Santee Print Works, Sumter, S. C., has work going forward rapidly on erection of a new building on Mayesville highway just outside of the Sumter city limits. The new plant is expected to be completed and in operation by December. It will have 85% new machinery and will operate six printing machines, with a productive capacity three times that of the present establishment.

Shawnee Finishing Co., E. Stroudsburg, Pa., has been opened by Jerome P. Donnelly to specialize in dyeing and finishing of shirtings and a number of other men's-wear fabrics.

NEWS ABOUT *Men*

John Archer, vice president of Rollins Hosiery Mills, Inc., Des Moines, Iowa, has been appointed general manager of the hosiery division of Munsingwear, Inc. Mr. Archer will be located in the company office in Des Moines.

Fred S. Arnold, former superintendent of Alworth Woolen Mills, Duluth, Minn., which is now closed, has been named manager of Seymour Woolen Mills, Seymour, Ind.

John Atkinson, Methuen, Mass., has become second-shift overseer at Atkinson Spinning Co., Lowell, Mass.

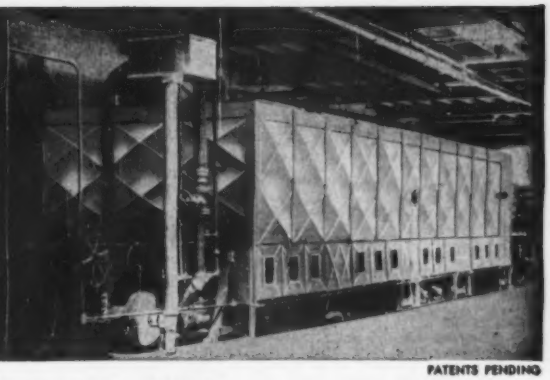
Robert M. Bird, Jr., training supervisor at May plant of E. I. du Pont de Nemours & Co., Inc., Camden, S. C., has been transferred to the company office at Wilmington, Del.

Dr. Frederick Bonnet, former head of the standards department of American Viscose Corp. and now technical advisor to the president, was recently awarded the degree of Doctor of Textile Sciences from the School of Textiles, N. C. State College, Raleigh, N. C.

A. H. Bouchard has returned to Globe Mills of American Woolen Co., Utica, N. Y., as overseer of weaving. He formerly was with Verdun Mfg.

Another "first"!

CARBOMATIC "UNA-RAY" OVEN



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(TEAR OUT AND MAIL)

News About MEN (Continued)

Co., Woonsocket, R. I.

Ralph W. Bowen has resigned as superintendent of the knitting department of Hub Hosiery Mills, Lowell, Mass.

Francis Burr, formerly with Monsanto Chemical Co., has joined Burlington Mills, Greensboro, N. C., to assist in resin control and development. Mr. Burr will be concerned with crease-proofing resins used in finishing synthetic suitings.

Henry Caldrice has become overseer of finishing at Yantic Woolen Co., Yantic, Conn. He was formerly with Arcadia Woolen Mills, Atlanta, Ga. and North Star Woolen Co., Lima, Ohio.

John Campbell has become assistant superintendent at Wamesit Processing Co., Wamesit, Mass.

Harry L. Cannon has resigned as assistant superintendent of Roanoke Weaving Plant, Vinton, Va., to become superintendent of new Copland Fowler Industries plant at Burlington, N. C.

Roy W. Clements, president of Globe Knitting Works, Grand Rapids, Mich., has become chief executive officer to succeed **Grover C. Good**, who continues as chairman of board. Mr. Good has disposed of his stock interest, which has been acquired by Mr. Clements, Siegel W. Judd, Jay H. Petter, and C. J. Weihe, all of whom are directors of the company.

Urban Cottrell has resigned as overseer of weaving, third shift, at Pansy Weaving Mills, Pawtucket, R. I.

W. F. P. Coxe, has been promoted to director of purchases for American Enka Corp., Enka, N. C., succeeding the late Harry S. Pos. He will be responsible for all purchasing functions of the rayon-making concern, with the exception of local purchases made by the Lowland, Tenn., plant and by the New York office.

R. W. Davie has become overseer of dyeing at Stafford Printers, a division of Goodman & Theise, Inc., Stafford Springs, Conn.

David L. Davis is now with the Textile Div., Thermoid Co., Trenton, N. J. He was previously with Peerless Woolen Mills, Rossville, Ga.

Carl R. Dolmetsch has been named general manager of the viscose division of Celanese Corp. of America, with office at Narrows, Va. Mr. Dolmetsch joined the company in 1946, when Tubize Rayon Corp., with which he was associated, was acquired by the firm.

Clifford Doolittle, accountant for Celco plant of Celanese Corp. of America, Pearisburg, Va., has been promoted to general manager of Celanese Venezolana S. A., a corporation recently formed to erect a yarn plant near Carácas, Venezuela.

Samuel Durham, manager for 10 years of Lansing Div. of Burton Dixie, Inc., Lansing, Mich., has been transferred to Dallas, Texas, where he will head the firm's Dallas bedding plant.

Joseph Einstein has resigned as overseer of finishing at Puritan Mills, Plymouth, Mass.

James L. Eskridge has joined Stonecutter Mills Corp., Spindale, N. C., to assist in the manufacturing operations of the company. Mr. Eskridge was formerly with Burlington Mills Corp. in an executive capacity.

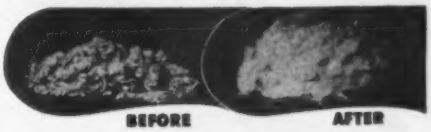
Walter Eversfield, assistant secretary-treasurer and investment manager at Dominion Textile Co. Ltd., has been appointed vice president of finance, a newly created position.

John C. Fay has been promoted from assistant secretary to vice president of Avondale Mills, Sylacauga, Ala. **Reuben Bell** has been elected to succeed him in the office of assistant secretary.

Irving Fener has been named head of print department of Finished Goods Div., Berkshire Fine Spinning Associates, Inc., Providence, R. I., Mr. Fener succeeds **Gordon H. Kaiser**, who will continue with the company in an advisory capacity and handle sales to chain and mail-order groups.

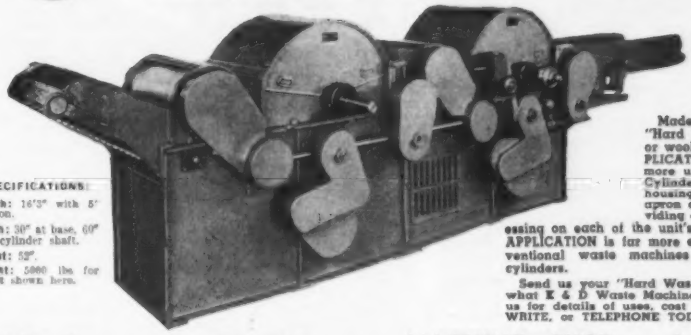
Charles G. Gass has been named assistant manager of the contract department of North Star Woolen Mill Co., Lima, Ohio. He formerly was with

You can now whip your "HARD WASTE" problem—with the



LEFT above is hard twist unsized cotton warp waste. RIGHT—the processed waste after one time through K & D Tandem Unit. Many mills, pleased with such results from first installation, have ordered additional units.

K&D TANDEM APPLICATION WASTE MACHINE



SPECIFICATIONS:
Length: 16'3" with 5' apron.
Width: 30" at base, 60" at cylinder shaft.
Height: 52".
Weight: 5000 lbs. for unit shown here.

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News About **MEN** (Continued)

the contract division of Simtex Mills.

Joseph M. Hanniburg and **Arnold Grant** have been elected directors of Aspinook Corp., Jewett, City, Conn.

A. Philip Jarvis has resigned as superintendent of George Mabbett & Sons Co., Plymouth, Mass. **Robert M. Jones** has resigned as designer.

George Y. Jean, former chief product engineer at James Lees & Sons Co., Bridgeport, Pa., has been named technical director and will head the newly organized standards department. **William Ebersold**, with 30 years service at Lees as chief chemist and superintendent of wet processing, will succeed Mr. Jean in his former position.

Arthur T. Klinger has been named staff engineer at American Viscose Corp., Roanoke, Va. Mr. Klinger has been assistant craft foreman in the electrical engineering division since 1948.

Eaton B. Lloyd has been named director of merchandising and sales for Dan River Mills. He will make his headquarters in the company New York sales office. **W. J. Fullerton** has resigned as general styling and product-development manager of the company.

N. E. Malesky, who has been with Prestige, Inc., New York, N. Y., has resigned his position as general production manager in charge of Southern and Eastern plants. **Dorothy W. Walley** has resigned from her post as finishing manager at Se-Ling Hosiery Branch, Nashville, Tenn.

J. N. Marshall, vice president and manager of Deering, Milliken & Co. mills in Maine, has resigned. He has been succeeded by **W. B. D. Stroud**, who was transferred from Southern mills of the company.

Daniel A. McCanless has been appointed plant manager of United Rayon Mills, Elberton Ga.

W. R. McCurdy, president of Lincoln Hosiery Ltd., St. Catharines, Ont. has moved to Victoria, B. C., to take up duties of managing director of a new full-fashioned hosiery mill, McCurdy Hosiery Ltd. The new mill will produce 45- and 51-gage stockings. Mr. McCurdy will continue his active interest in Lincoln mill.

J. Howard McGrath, United States Attorney General, was elected a director of Lonsdale Co., Providence, R. I., at annual meeting of stockholders recently.

Ellison S. McKissick, Greenville, S. C., president of Alice Mfg. Co., which operates Alice plant and Arial plant at Easley, S. C., has been elected a director of Cannon Mills Co., Kannapolis, N. C., succeeding the late George W. Fraker.

William McNamara has become overseer of dyeing at Norwich Mills of American Woolen Co., Norwich, Conn., succeeding **F. H. Moran**, who has retired.

Allen Millens, former general overseer of wet and dry finishing at Wood Worsted Mills, American Woolen Co., Lawrence, Mass., has been tranferred to National & Providence Mills of the company, Providence, R. I., succeeding **George Lodge**, who has resigned.

Ralph Presgrave, director of production of York Knitting Mills Ltd., Toronto, Ont., was recently elected vice president of company in addition to his present duties.

Leander L. Renquin is now plant superintendent of Verney Corp. unit at Manchester, N. H. Mr. Renquin was formerly general manager of Amerton Fabrics and plant superintendent of Greenhalgh Mills, both of Pawtucket, R. I.

D. H. Rhebeck has been appointed controller of Rayonier, Inc., and will make his headquarters in executive offices in New York, N. Y. Mr. Rhebeck has been in charge of company fiber-division accounting in Hoquiam, Wash.

G. M. Robb has been appointed manager of Bemis Bro. Bag Co., textile bag and multiwall paper-bag-manufacturing plants at Houston, Tex. He succeeds **E. V. Deaderick**, who has assumed newly created post of Eastern director of sales, with headquarters in New York, N. Y. **C. J. Hurster** succeeds Mr. Robb as sales

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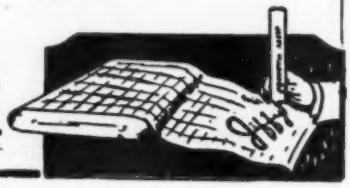

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News About MEN (Continued)

manager of the Houston sales division.

Lionel Rogosin has been appointed vice president of Beaunit Mills, Inc., New York, N. Y. Mr. Rogosin was also named a vice president of Skenandoa Rayon Corp., Utica, N. Y., a Beaunit subsidiary.

Arthur Ross, Jr., has been elected president and chairman of the board of Tip-Top Hosiery Mills, Inc., Asheboro, N. C. **Cecil Lane** was elected vice president in charge of personnel and production; **Sam Coble**, vice president in charge of sales; **James I. Chrismon**, treasurer; **Julia Ross Lambert**, assistant treasurer, **G. E. Miller**, secretary; and **Margery Edwards Ross**, assistant secretary.

William Ruck, Chicago, Ill., has been named manager of the Lansing Div., Burton-Dixie, Inc., Lansing, Mich., cotton-processing plant for the auto industry. Mr. Ruck has been with the company for 28 years.

H. Greville Smith is the new president of Canadian Industries Ltd., with rayon- and nylon-weaving plant and head office in Kingston, Ont. He succeeds **George W. Huttett**, who will continue as the chairman of the board of directors.

Albert E. Snyder has been promoted to staff engineer with American Viscose Corp., Roanoke, Va. Mr. Snyder has been with the company since 1946 in its engineering department.

John Staples has resigned as group manager of Flint No. 1, Modena, and Ranlo plants of Burlington Mills Corp., Gastonia, N. C.

Lyle Stoddard has resigned as overseer of weaving at Neponset Woolen Mills, Canton, Mass.

Nolan Thrope has joined the New York office sales staff of Roosevelt Mills, Manchester, Conn. He was formerly in charge of the New York office of Fuld & Hatch Knitting Co., now affiliated with Roosevelt mills.

Stephen A. Ward has been appointed assistant to the plant manager of the U. S. Rubber Co. combed-yarn mill at Gastonia, N. C. He has been associated with the company since 1936, serving at Winnsboro, S. C., Hogansville, Ga., and Scottsville, Va.

L. P. Webster, secretary of Dominion Textile Co. Ltd., Montreal, Que., has been appointed a vice president of the company. **Douglas Archibald**, who has been with the company since 1945, has been named secretary. **Walter Eversfield** has been appointed vice president of finance, a newly created position.

Arthur C. Wheatcroft, formerly plant manager of Columbia Mills, Inc., Wilkes-Barre, Pa., has joined Tennessee Valley Fabric Corp. as plant manager of the Sweetwater, Tenn., plant.

W. G. Willoughby, former night superintendent at Fickett Cotton Mills, Whitehall, Ga., has resigned.

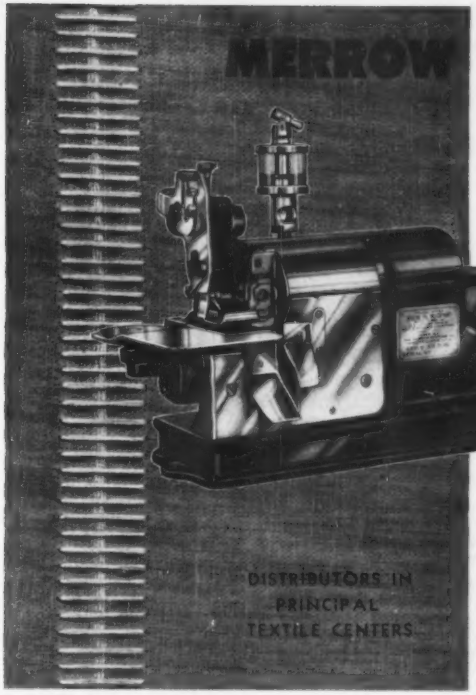
Jack Yaun has been appointed assistant dyer in the cotton division of North Carolina Finishing Co., Salisbury, N. C. Mr. Yaun was formerly with Gregg Dyeing & Finishing Co., Graniteville, S. C.

OBITUARY

Lewis DeV. Blake, 80, retired president of Belton Mills, Belton, S. C., died recently.

Ernest F. Culbreath, 49, owner of Ernest F. Culbreath Co., Charlotte, N. C., died recently after a short illness.

William B. Ford, 73, one of the founders of the American Cotton Council and known for his experiments in cotton growing, died recently.



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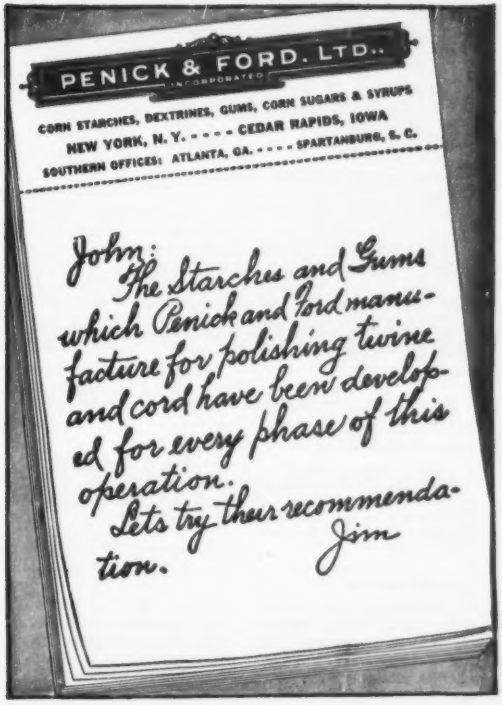
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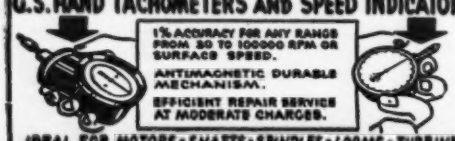

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News About MEN

(Continued)

HIRAM S. RIVITZ, 68, chairman of the board of Industrial Rayon Corp., Cleveland, Ohio, died recently. Although he had retired from active business in 1923 at the age of 39, Mr. Rivitz re-entered the industrial field in 1926, when he reorganized Industrial Rayon's predecessor, Industrial Fiber Corp. He was made vice president and general manager in 1926 and was elected president of the company in 1927. In 1949 he resigned this office and became chairman of the board.

Arthur W. Littlehale, 63, president of William Gorse Co., Needham Heights, Mass., died recently.

Louis Price, 58, founder and president of Price Knitting Mills, Philadelphia, Pa., died recently.

Ernest Rees, president of Elk Cotton Mills, Fayetteville, Tenn., died recently.

Samuel Rossby, 61, founder of Rossby Co., Yonkers, N. Y., died recently.

Horace A. Yount, 90, organizer of Bloomfield Cotton Mills, died recently in Statesville, N. C.

Ross W. Baker, 75, treasurer of Lawrence Mfg. Co., Lowell, Mass., died recently.

Armstrong Beattie, manager of the supplies department of William Carter Co., Needham Heights, Mass., for 35 years, died recently.

Harold Brown, 92, retired secretary and treasurer of Alexander Smith, Inc., Yonkers, N. Y., died recently. Mr. Brown retired from active service with the company 45 years ago.

William B. Eddy, 64, manager of the Philadelphia, Pa., office of William Carter Co., died recently. He entered the company Boston, Mass., office in 1910 and was made Philadelphia manager in 1923.

Paul C. Kaiser, 62, retired plant manager and executive of E. I. du Pont de Nemours & Co., Wilmington, Del., died recently.

Joseph D. Kennedy, Jr., 33, director of the export department of Cluett, Peabody & Co., Inc., New York, N. Y., died recently.

Jay W. Purdy, 71, retired manager of Real Silk Hosiery Mills, Indianapolis, Ind., died recently.

John C. Rich, 62, sales control supervisor of General Chemical Div., Allied Chemical & Dye Corp., Camden, N. J., died recently. He joined the company in 1902.

Chester C. Wood, 61, vice president and general manager of Lebanon Woolen Mills and Lebandale Woolen Mills Corp., Lebanon, N. H., died recently. He was at one time associated with Hayward-Schuster Mills, East Douglas, Mass., as superintendent.

Charles E. Bishop, 79, retired superintendent of Cleveland Woolen Mills, Cleveland, Ohio, died recently.

James F. McCoy, 61, former foreman at Wanskuck Co., Steere Branch, Providence, R. I., died recently. Mr. McCoy retired from his position five years ago. **John J. Gibbons**, employed for 20 years as overseer at Wanskuck, died in June.

Hugh Hamilton, overseer of finishing with Faith Mills, Averill Park, N. Y., died recently.

Morris R. Springfield, 53, a department overseer of Frank Ix & Sons mill at Cornelius, N. C., died recently.

H. Bernard White, 58, overseer of Arkwright Cotton Mill No. 2, Spartanburg, S. C., died recently. He had previously been associated with Borden Mills, Kingsport, Tenn.; Glendale Mills, Inc., Glendale, S. C.; and the Moreland Chemical Co.

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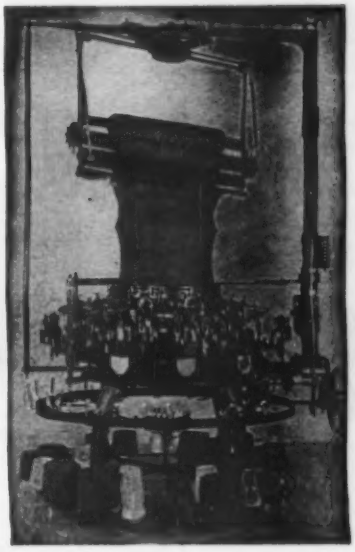


ESTABLISHED IN 1846 . . . over a century of continuous service to the knitting industry throughout the world

TOMPKINS BROS. CO.
623 ONEIDA ST. SYRACUSE 4, N. Y.

THE LOYAL T. **IVES** COMPANY

SPRING BEARD KNITTING NEEDLES

Circular Full Fashioned, Tricot and Milanese Knitting Frames, also Narrowing, Stand, Transfer Points and Welt Hooks for Full Fashioned Machines, Sinkers, Jacks, Guides or Flat Eyes, Sley and Milanese Points, Transfer Points or Quills, etc.

Sheet Metal Specialties to Order

NEW BRUNSWICK NEW JERSEY

When You Change Your Address . .

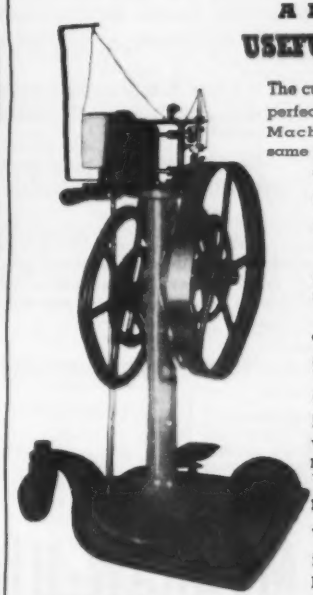
It will help us keep your copies of TEXTILE WORLD coming to you each month if you will promptly advise us of any change of address.

Director of Circulation
TEXTILE WORLD,
330 West 42nd St., New York 18, N. Y.

Please change the address of my Textile World subscription.

Name.....
Old Address.....
New Address.....
New Company Connection.....
New Title or Position.....

A NEW AND USEFUL MACHINE



The cut shows our recently perfected 9-C Foot Power Machine, which is the same durable machine as our 9-B with the exception that it is chain driven.

This machine is designed especially for heavy materials.

The chain drive gives positive drive to the Sewing Head and prevents stalling of the Head when the needle pierces the material. With this drive, the machine operates very easily for sewing Heavy Woolens, Ducks, Felts, etc.

Textile World

DINSMORE MFG. CO.
SALEM Box 267 MASS.

THIS MAN WOULDN'T NEGLECT

A MACHINE IN HIS PLANT

...yet he hasn't had a Chest X-Ray!

He checks every piece of mechanical equipment he owns for wear, lubrication, efficiency.

Yet he fails to take the simple precaution of a Chest X-Ray to make sure he does not have tuberculosis. *Not because he's opposed to the X-Ray. Simply because he is not sufficiently informed—or just hasn't taken the time and trouble, or does not realize the seriousness of the problem.*

A Chest X-Ray is the first step toward detecting tuberculosis in its early stages. And in its early stages it can be cured with the least loss of time from work.

So, if you're the man above, that one simple reason should make you get your Chest X-Ray—*today*. But listen, see how serious this really is:

Between the ages of 15 and 34, tuberculosis leads all other diseases as a cause of death—although at no age are you safe from TB. Yet, if everyone does his part by getting a Chest X-Ray periodically, and the majority of cases thus discovered are followed up, we can eliminate TB entirely as a public health hazard!

Will you do your part today? Get a Chest X-Ray. It may mean your life!

A PUBLIC SERVICE PROJECT THE ADVERTISING COUNCIL

Published in the public interest by:

McGRAW-HILL PUBLICATIONS

SEARCHLIGHT SECTION

EMPLOYMENT • BUSINESS • OPPORTUNITIES • EQUIPMENT—USED or RESALE

UNDISPLAYED RATE:
$1.20 cents per line, minimum—3 lines. To figure advanced payment count 5 average words as a line.
EMPLOYMENT WANTED AND INDIVIDUAL SELLING OPPORTUNITY undisplayed advertising rate is one-half of above rate, payable in advance.
PROPOSALS, $1.20 a line an insertion.

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AN ADVERTISING INCH is measured ⅞ inch vertically on one column, 3 columns—30 inches—to a page. T.W.

NEW ADVERTISEMENTS received by August 16th, at the New York Office, 330 W. 42nd St., N. Y. 18, will appear in the September issue subject to limitation of space available.

REPLIES (Box No.): Address to office nearest you
NEW YORK: 330 W. 42nd St. (18)
CHICAGO: 520 N. Michigan Ave. (11)
SAN FRANCISCO: 68 Post St. (4)

POSITIONS VACANT

LOOM FIXER: Have opening for high grade automatic jacquard loom fixer. Factory located in N. Y. metropolitan area. Write giving qualifications, experience, starting salary expected. P-9618, Textile World.

WANTED: FINISHER, especially experienced in resin finishes on spun rayons and blends in medium and heavy suitings. Location New England. Reply in confidence with complete personal details and salary requirements to P-9588, Textile World.

WANTED COTTON Textile mill technician who knows all phases of corduroy grey goods, manufacturing, also how to maintain quality of yarn and fabric. The man who knows and can get results can go places with us. Attractive salary and a bonus arrangements. A very interesting proposition for a superintendent or manager wishing to better himself. Please write us at once full information regarding education and experience. Our people know of this ad. P-1251, Textile World.

WEAVING SUPERINTENDENT interested in six to twelve months' position in South America to introduce warp preparation and filament rayon and spun rayon constructions. Must be able to select and introduce rayon fabrics consistent with equipment available in local mills. Salary $1,000 per month. P-1247 Textile World.

DYER-FINISHER interested in six to twelve months' position in South America to introduce latest dyeing, finishing, and crease-resistant techniques for spun rayon fabrics. Salary $1,000 per month. P-1246, Textile World.

POSITIONS WANTED

SUPT. OF Dyeing, age 36, graduate in chemistry, B.S. Degree, 14 years experience on raw stock, Top dye and piece goods, with all classes of dyes. Can furnish best of reference with regards to high production. Write PW-9728, Textile World.

RAYON THROWSTER Wide experience, throwing rayon yarns, also nylon, employed, married, desires change. South preferred. PW-1346, Textile World.

THROWSTER WITH more than thirty years experience in all branches, silk, nylon & synthetic yarns for weaving, hosiery, combinations and thread trades is open for position as Supt. or Manager. Thoroughly competent of assuming full charge. PW-1399, Textile World.

When Answering
BOX NUMBERS...
to expedite the handling of your correspondence and avoid confusion, please do not address a single reply to more than one individual box number. Be sure to address separate replies for each advertisement.

SELLING OPPORTUNITIES WANTED

SALESMAN SEEKS to represent mill spinning industrial yarn of natural, Synthetic, or Blend fibres. Territory New York City. Straight commission. References. SA-1467, Textile World.

WANTED TO Weaving trade line or item, New England territory, excellent following, textile school graduate, systematic coverages. Now carrying reeds. P. O. Box 384, Woonsocket, R. I.

MANUFACTURERS AGENT: Interested in selling to chain stores-knitted or woven novelties of natural or synthetic fibres. SA-1490, Textile World.

BUSINESS OPPORTUNITY

Fall River Driver—
Mechanic with many years experience wants contract for new tractor and trailer, will pick up and deliver anywhere at a great savings to your company. For information write BO-1301, Textile World.

PATENTS

CONSULT: Z. H. POLACHEK,
Reg. Patent Attorney, 1234 Broadway, New York 1, N. Y.

TEXTILE PLANT WANTED: We are now manufacturing over $20,000,000 in various lines and wish to expand by acquisition of assets or stock of one or more industrial companies. In our negotiations the sellers' problems and wishes will receive full consideration. Present personnel will normally be retained.
Address all replies
"Confidential" C. J. GALE, Sec.
233 Broadway, N. Y. 7, N. Y. BA 7-1810

PROFESSIONAL SERVICES

EATON & BELL
Patent Attorneys
904 Johnston Bldg., Charlotte, N. C.
753 Munsey Bldg., Washington, D. C.

THE KULJIAN CORPORATION
Engineers • Constructors
1200 North Broad St., Philadelphia 21, Pa.
Washington, D. C.; Rome, Italy;
Calcutta, India; Caracas, Venezuela;
Mexico City, Mexico

McKOY-HELGERSON CO.
Industrial Construction
Greenville, South Carolina

KAMINER-HELGERSON CO.
Industrial Piping
Greenville, South Carolina

MEN WANTED
POSITIONS OPEN

We can place: MANAGER worsted yarn mill; manager sheet and pillow case plant; worsted cloth mill supt. for yarn mfg., weaving, dyeing and finishing; managers for rayon-cotton mills in foreign countries; supt. worsted yarn mill; supt. bleach, and finish plant; underwear mill supt.; supt. nar. fab. plant; supt. corduroy grey goods mill; supt. or foreman experienced in coating duck; supt. large sewing plant nylon fabrics; factory mgr. (mfg. products for textile mills); Supt. woolen yarn mill; asst. supt. nar. fab. mill; office mgr. (south); sales mgr. for firm mfg. textile specialties; worsted-woolen designers; employment mgrs. and asst. employment mgrs.; asst. supt. woolen mill.

OVERSEERS FOR FOLLOWING DEPTS.: underwear knit. and cut.; tricot finishing; worsted drawing; dyeing ladies' seamless and full fash. hosiery $500 mo.; finishing back filled goods; put up depts. (2); jig dyeing, 2nd shift $100; weld. dressing; wstd. card., comb. and gilling; dyeing rayons, box work 3d shift $125-$150; package dyeing 2nd shift.

SECOND HANDS FOR FOLLOWING DEPTS.: woolen frame spin.; worsted drawing; hosiery dyeing; ladies' seamless full fash. hos. dyeing $400-$450 mo.; woolen carding; woolen raw stock and piece goods dyeing; rayon-cotton weaving.

SALESMEN and sales trainees; chemists, chem. engineers and laboratory men; textile grad. with or without practical mill experience; textile engineers; time study men; woolen, worsted, cotton and rayon loom fixers for United States and foreign countries; chief power plant engineer; worsted yarn salesmen; cotton card grinder; head fixer Draper looms; fixer Wildman full fash. hos. mach.; sewing mach. fixers; fixer-foreman Wildman girdle mach.; mule fixers.

List your confidential, application with us to keep informed of attractive positions open in the textile mills.

CHARLES P. RAYMOND SERVICE, Inc.
294 Washington St. Boston, Mass.

MANAGER WANTED
for a Velvet Weaving Mill
Must be experienced on Pile Fabric materials. Call or write to
VELVET TEXTILE CORPORATION
18 Gilbert Street West Haven, Conn.
Phone number West 3-2521

Manufacturers Agents wanted for well-known, long-established, medium-sized company manufacturing textile chemicals. Applicant must be well introduced to textile mills.

Territories: Canada, New York State, New England States, New Jersey and Pennsylvania or parts thereof.

Attractive opportunity for right man, who would share in already existing business.

Submit complete data of qualifications and photo in full confidence in first letter.

Box RW-1529, Textile World
330 W. 42 St., New York 18, N. Y.

Equipment Wanted Advertising Page 262, Business Opportunity Advertising Pages 262 & 269

FOR SALE

COMPLETE 16,000 SPINDLE COTTON SPINNING PLANT

NOW IN FULL OPERATION

PRODUCING CARDED HOSIERY YARNS UP TO 1/30s

Plant Includes:

Opening and Picking, New in 1947; Carding, Drawing, Long Draft Roving and Spinning, Completely Modernized and Reconditioned in 1947/8;

All Auxiliary Equipment

(BUILDING NOT INCLUDED)

Apply BO 1312, TEXTILE WORLD
330 W. 42 St., New York 18, N. Y.

WANTED

TRICOT KNITTING MACHINES WANTED

168 inch width, minimum speed 225 R.P.M.
ALSO: Direct 21 inch Tricot Warper and Creel
ALSO: 21 inch Beams
Will consider smaller size warper
if adequate matching beams available

W-1252, Textile World
330 W. 42 St., New York 18, N. Y.

BOUGHT — SOLD
Glycols—Cellosolves—Ethanolamines
Phthalic—Maleic—Penta
Titaniums—Bichromates—Dyes—Colors
Soda Ash—Caustic Soda, etc.
CHEMICAL SERVICE CORP.
80-10 Beaver St. New York 5, N. Y.

WANTED
Surplus Textile Equipment of all Types
STANDARD MILL SUPPLY
1064-1080 Main Street, Pawtucket, R. I.
Empire State Bldg., New York, N. Y.
2319 Hutchison Ave., Charlotte, N. C.

DYESTUFFS
Will buy your surplus and obsolete dyes and chemicals for cash.
NEW ENGLAND PRODUCTS CO.
91 Oliver St. Boston, Mass.
Established 1919

BY WISELY

advertising your used or surplus new equipment in the Searchlight Section you turn it into CASH.

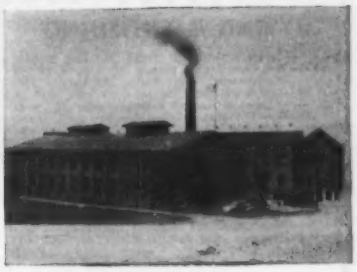
"SEARCHLIGHT" is the recognized national center for the buying and selling of such equipment.

Information Cheerfully Given. Address: Classified Advertising Division

Executive Offices and New York Warehouse

McDOWELL ASSOCIATES INC.

FOR SALE



Hudson, New York Warehouse

PARTIAL LIST---IMMEDIATE DELIVERY

COTTON SPINNING

55 Mason CARDS 40", 27" doffers, 100/110 wire.
14 Mason CARDS 45", 27" doffers, 12" coilers.
3 Silver LAPPERS, spools 8-¾" x 4-½".
13 SLUBBERS, 128 spdls. ea., 6" ga. 9" x 4" J-1 L.D.
4 SLUBBERS, 114 spdls. ea., 7-½" ga. 9" x 4-½" J-2 L.D.
2 SLUBBERS, 64 spdls. ea., 8-½" ga., 11" x 5-½" Casa. L.D.
13 SPINNING FRAMES, 224 spdls. ea., 2¾" ga.
14 SPINNING FRAMES, 216 spdls. ea., 2-¾" ga. Roth L.D.
11 SPINNING FRAMES, 252 spdls. ea., 3-¼" ga. Casa. L.D.
3 SPINNING FRAMES, 300 spdls. ea., 3-½" ga. Casa. L.D.
8 SPINNING FRAMES, 252 spdls. ea., 3-½" ga. Casa. L.D.
2 HIGH SPEED WARPERS, filament rayon, magazine creels, 824 live ends

LOOMS—DRAPER

250 Model E, 38"-40", motor, belt drive.
300 Model E, 40" worm takeup, roll top, belt drive.
150 Hopedale 40", 4 har. worm takeup, mtrsd.
20 Model X 44", worm takeup, mtrsd.
96 XK 44", 20 har. dobby, mtrsd.
300 XD 44", 20 har., mtrsd.
48 Model K, 45", 25 har. mtrsd.
32 XK 47", 16 har., mtrsd.
12 68", 2x1, 20 har. mtrsd.
30 Modified D, 72", 2x1, 16 har. mtrsd.
10 Modified D, 82", 16 har.
48 Modified D, 82", 24 har.
12 Model O, 93" B.S.

LOOMS—CROMPTON & KNOWLES

16 C-4, 48" B.S., 4 har. 4x1, mtrsd.
48 single shuttle 48" R.S., mtrsd.
140 50" B.S. auto. 2x1, 20 har., mtrsd.
180 52" B.S. auto. 2x1, 20 har., mtrsd.
34 S-5, 56", 20 har., mtrsd.
73 S-5, 56" B.S., 2x1, 20 har. mtrsd.
24 4x4, 62" B.S., mtrsd.
24 auto., 72" R.S., 4x1, 20 har. mtrsd.
6 W-2 4x1 auto., 76" R.S., 20 har., mtrsd.
72 Veri-best, 82" auto., 4x1, 25 har., mtrsd.
20 82", 4x4, 25 har., belt drive.
12 92" auto., 4x1, 25 har., mtrsd.
4 Veri-best, 110" R.S., auto. 4x1, 25 har.

LOOMS—MISCELLANEOUS

1 Schoenherr 50" Frieze Loom, 1200 hook jacquard, creel, mtrsd.
10 German Frieze Looms, 54", 1304 hook jacquards, creels, mtrsd.
2 C&K 86" R.S. double shuttle, plush Looms, 20 har., mtrsd.
8 Bobbinette Lace Looms, 204", 10 and 12 point; 220"-222", 8 and 9 point.

DYEING AND FINISHING

1 STEAM AND ACID AGER, 36 brass rolls, steam coils, 72" width.
3 BATCHERS, single drum 45", 66", 78" width.
1 BOIL-OFF, 7 drum, S.S., B.B. unit.
1 BRUSH, up and down cylinder 66" x 42" D.A.
1 DESPECKER 90" bladed beaters, wire brushes, B.B. clip.
1 new TREADLE and CROSSER BRUSH, corduroy 40".
1 CALENDER, friction, 3 roll, 43½.
1 CALENDER, 4 roll, 112" lever pressure mtrsd.
1 CALENDER, hydraulic, 60", 100 ton, mtrsd.
1 CALENDER, embossing, 54", #2 treebark, mtrsd.
1 CALENDER, embossing, 72", cobra grain, mtrsd.
1 CALENDER, 2 rolls, 82", motor and Reeves.
1 COTTAGE STEAMER 12' x 78" dia., 2 truck unit.
1 DEWING MACHINE, 60", adjustable deflector boards.
4 DOUBLING, WINDING & MEASURING MACHINES, 60"-66"-72"-80".
1 COMBINATION DOUBLING & OPEN WIDTH MEASURING MACHINE, 66".
1 Set 15 DRY CANS, S.S. 72".
1 Set 21 DRY CANS, copper 52"
1 LOOP DRYER, 48' x 84", rev. fibre glass sticks, air fin coils, motors, oper. temp. 300°.
1 NET DRYER 78" wide 6 tier inside lighting, mtrs. switches, etc.
1 RAW STOCK DRYER, 1000 lb. per hr., apron 68" wide with feeder, mtrs., etc.
2 DYE KETTLES, S.S. totally enclosed 12 string with mtrs.
1 PACKAGE DYEING MACHINE, C.I. 100 lb. S.S. spdls. pump, ring, with motor.
1 DYEING MACHINE, skein, Cascade type, 10 arm monel metal.
1 DYEING MACHINE, 72" skein, bubble type, pump and motors.
1 RAW STOCK EXTRACTOR, 30", squeeze lever pressure.
1 EXTRACTOR 48" S.S. basket self balancing-V-belt underneath drive.
1 EXTRACTOR 50" S.S. basket self balancing-V-belt underneath drive.
1 EXTRACTOR horizontal 60" S.S. cover.
1 EXTRACTOR 60" rubber lined basket, mtrsd.
1 FOLDER, cloth, 78" adj. ½ yd. to 42".
1 INSPECTING & MEASURING UNIT—64", 2600 yd. dial with rolling head.
1 INSPECTING & MEASURING UNIT—58", adj. table, reverse wind, mtrsd.
1 JIG 50" S.S. pans and immersion rolls.
2 MIXING KETTLES 26" x 27", pumps and heating coils.
1 MIXER for resins, etc., 2 pole, 120 qt. cap. ea., 3 beaters, mtrsd.
1 NAPPER 80" D.A. 18 roll, mtrsd.
1 NAPPER 66" D.A. 24 roll, double belt workers.
1 NAPPER, knit goods, 18 roll 66".
1 NAPPER, knit goods, 20 roll 80".
1 PALMER, Tenter Quetsch Unit, 40' x 50" width S.S. clips.
2 POWER PERCHES 66"-72" motors and reducers.
2 POWER PERCHES 93½" tilting tables for mending, forward and reverse, mtrsd.
2 PRESSES, rotary steam, 66"-96" double belt.
1 PRINT MACHINE, 7 color, 60" with 10 dry cans, blanket, washer, mtrsd.
1 Hydraulic ROLLER JACK for Print Machine, with pump and motor.
1 Nash Vacuum PUMP, L-4.
3 Nash Hytor Vacuum PUMPS—2-L3-L4.
1 SCOURING UNIT, 3 bowl, 36" width, 1000 lbs. per hour, motors and model N feeder.
8 SEWING MACHINES, rotary foot power.
5 SEWING MACHINES, Railway Portable 52"-60".
1 SHEAR 80" cut, 4 blade automatic, B.B., mtrsd.
1 SHEAR single blade, 66½" list savers.
3 SHEARS, 66½" double blade, model B.
2 SHEARS, 66½" double blade, model A.
1 SHEARING, STEAMING & BRUSHING RANGE with 2 double blades, 66½" shears.
1 SHEARING, LOOP CUTTER AND SEWING UNIT, 90" with 4 sets of cutting parts, mtrsd.
2 SHEARS, carpet, 19'-20' cross cut.
1 SOAKING MACHINE 3 arm for sizing and tinting rayon skeins.
2 SQUEEZE SETS, 2 roll units, 50"-65".
2 SQUEEZE SETS, 3 roll units, 50"-60".
1 TACKING MACHINE, 90" with Singer Sewing Head.
4 TEAZLE GIGS 64" x 30" dia. cyl., 2 contact units.
4 TENTER FRAMES, clamp i.e., 30'x60", 50/x60", 30'x64", 40'x54".
1 PIN TENTER DRYER straightaway 50'x72" steel housing, motors comp.
1 PIN TENTER DRYER straightaway, 79'x148" housing, Infra Red Burners, motors complete.
1 PIN TENTER FRAME, 50'x70" over and under type.
1 CONTINUOUS WASHER, 6 box, 40".
1 WASHER, Greige, 72", 4 comp. 15 dry cans, motor and drive.
2 WASHERS, 4 string, wood rolls, 19" dia.
1 WETTING OUT MACHINE 72" wood tank, expansion rolls and spray pipe attachment.
1 WASHER 72", 4 cypress tanks, vacuum pump, slot, etc.
2 WINDERS, 50"-60", 100 yd. dial and measuring drums.

COMPLETE COTTON SPINNING UNIT APPROXIMATELY 7400 SPINDLES, 36 WHITIN CARDS

18 C&K, W-3 Auto. Looms, 92" 4 x 1 box, 25 Harness, 4 bank EWSM, Bajur Lubricators, Pick Counters, Motorized 1½ HP, 440/60/3/1150 RPM. 30" dia. Steel Beam Flanges.

3 ABBOTT AUTOMATIC CONE WINDunits 108 spdls. each, auto. heads, ERS, 1949 model, 1 unit 68 spdls., 2 hoists, hopper, motors, etc.

EXCLUSIVE SALES AGENTS for HOLTZ "High Speed" Knitting LOOMS

EXPORT SALES AGENTS for WERNER MACHINE COMPANY D. R. KENYON & SON

McDOWELL ASSOCIATES, Inc.

2568 Park Avenue — Bronx 51, New York

Tel.: MElrose 5-6741

DYEING & FINISHING

1—Butterworth Tenter Frame 90' long x 54" wide, M.D.
2—Morrison Tenter Frames 40' long x 60" & 70" wide, M.D.
1—Butterworth Tenter Frame 30' long x 70" wide, M.D.
2—Van Vlaanderan Calenders, 3 rolls, 50" & 60" wide, M.D.
1—Hinnikens Padder, 2 rubber rolls, 52" wide, M.D.
10—Van Vlaanderan Tensionless Dye Jiggs, stainless steel auto. & semi-auto. reversing, 50" & 70" wide, Age 1949
1—Van Vlaanderan Palmer Tenter Unit, 50" cloth w/30' tenter frame
2—Van Vlaanderan Palmers 64"x60" with quetschs
4—Copper Jacketed Mixing Kettles w/agitators, 50 & 100 gallons
1—Hercules Centrifugal Extractor 60", M.D.
1—Cottage Steamer, 30" long x 90" dia., cast iron
1—Van Vlaanderan Button Breaker, 60" wide, 18 rolls, M.D.
1—Greige Washer, 78" wide, 3 nips w/27 copper dry cans, 76" wide
3—Van Vlaanderan Hi-Speed Tubers, 60" wide, M.D.
1—Stainless steel Boil-Off Range, 60" wide w/3 Rope Washers

1—MORRISON WILLIAMS RANGE, 60" wide, 2 Williams Boxes, Padder, 3—stainless steel wash tanks, Age—1948

1—DALGLISH PIN TENTER RANGE, 100' long Pin Frame, 60" wide, w/Proctor & Schwartz 80" housing, Proctor & Schwartz Pre-Dryer and Morrision Micro-Set Padder. Age—1947

COMPLETE MILLS

Modern Rayon Weaving Mill—56 looms & Hi Speed Warpers
Upholstery Fabric Weaving Mill—Draper Modified D looms
Cotton Yarn Long Draft Spinning Mill—20,000 spindles
Rayon Dyeing, Finishing & Printing Plant
Worsted Weaving Mill—40 C&K W3 looms

SPINNING

1—Saco Lowell Bale Breaker, 36"
4—Saco Lowell Kitson Feeder Hoppers, 38", Age 1941
22—Dobson & Barlow Cotton Cards, 41", 24" doffer
10—Saco Pettee Drawing Frames, 5 deliveries
28—Saco Pettee 11x5½ Slubbers, 64 spdls. L.D.
5—Saco Lowell 7x3½ Slubbers, 160 spdls., J-1, L.D.
4—Saco Pettee 9x4½ Slubbers, 100 spdls., J-1, L.D.
12—Saco Pettee Spinning Frames, 256 spdls., 2¼" ga., L.D.
2—Butterworth Reg Pickers, 17", w/apron
1—Sargent Burr Picker, 48" w/hopper
1—Cocker Hi-Speed Warper, 54¼", Age 1948

PRINTING

1—Textile Mch. Co. Print Machine, 14 colors, 45" wide
1—Rice, Barton & Fales Print Machine, 13 colors, 44" wide
1—Rice, Barton & Fales Print Machine, 12 colors, 50" wide
2—Rice, Barton & Fales Print Machines, 10 colors, 44" wide
1—Franklin Machine Co. Print Machine, 9 colors, 60" wide
1—Franklin Machine Co. Print Machine, 9 colors, 48" wide
2—Rice, Barton & Fales Print Machine, 8 colors, 60" wide
1—Rice, Barton & Fales Print Machine, 8 colors, 64" wide
1—Rice, Barton & Fales Print Machine, 8 colors, 50" wide
1—Rice, Barton & Fales Print Machine, 7 colors, 45" wide

LOOMS

400—Crompton & Knowles "Cotton King" auto 4x1 looms, 45½" r.s.
300—Draper XD looms, 44" cloth, 20 harness, M.D.
12—Draper O looms, 93" reed space, M.D.
200—Crompton & Knowles 55 auto. looms, 2x1 box, M.D.
24—Draper XK looms, 44" cloth, auto., M.D.
21—Draper X looms, 44" cloth, auto. M.D.

REMEMBER

Republic Textile

EQUIPMENT COMPANY

40 WORTH STREET NEW YORK CITY

Purchase and Sale of Used Machinery

REFINANCING • APPRAISALS • PURCHASE • SALE • LIQUIDATION OF MILL PROPERTIES

PRIVATE SALE—For Immediate Removal

WE ARE EXCLUSIVELY SELLING THIS CHOICE

EQUIPMENT FROM ONE MILL BY ORDER OF OWNER

2—Simpson Batchers, 47½" wide, cut-offs, Metal drums.
3—8' Stainless Steel Dye Becks, stainless steel reels, motors and reducers.
2—10' Stainless Steel Dye Becks, stainless steel reels, motors and reducers.
3—12' Stainless Steel Dye Becks, stainless steel reels, motors and reducers.
2—14' Stainless Steel Dye Becks, stainless steel reels, motors and reducers.
1—60" Hydraulic Padder, 2 rubber rolls, ball bearing, stainless steel pan, hydarulic drive.
6—60" Stainless Steel Dye Jiggs, ball bearing, stainless steel rolls, individual motors, enclosed gears.
1—Hercules 60" Stainless Steel Extractor, side motor, safety cover automatic timer.
1—54" Scutcher, stainless steel.
1—Hennikens 66" Boil Off, stainless steel conveyor, complete with pumps and motors.
1—60" Quetch, 2 roll, dip pan, motor.
1—60" Hydraulic Calender, 50 tons, ball bearing, 2 paper rolls, 1 center steel roll.
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1—Singer 72", 2 gas burners, blowers and motor.
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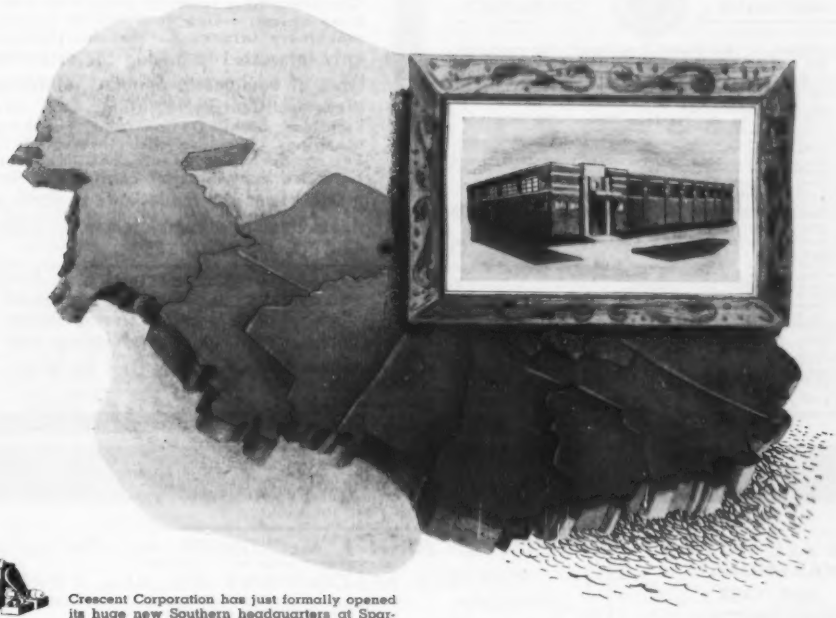

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1—W.J. Tenter Frames, 30' x 96"
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1—42" Self Balancing Extractor, M. D.
2—150 gal. Jacketed Kettles with agitators.
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2—54" General enclosed gear S. S. lined Dye Jiggs.
1—Set of 9—20" v 80" Heavy Steel Dry Cans.
1—Set of 7 copper cans, horizontal, Reeves & motor.
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1—84" Van Vlaanderen motor driven Tuber.
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Agitators of various sizes.
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20—60" Reedspace C&K 4x1 Looms, 20 Harness Dobby, Side Center Filling Motion, Plain Bearing, 2 shift pick counters, individually motor driven.

13—C&K 2x1 56" Reedspace oversize shuttle box, individually motor driven, 20 hook double index dobbys, 2 shift pick clocks, 1½ beams per loom.

9—C&K 2x1 52" Reedspace, oversize shuttle box, individually motor driven, 20 hook double index dobbys, 2 shift pick clocks, 1½ beams per loom.

20—60" Reedspace C&K Plain looms, 20 harness double index dobby, plain bearings, 2 shift pick counters, motor driven.

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4—2600 Hook Jacquard Machines—only.

10—600 Hook Jacquard Machines.

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2—Measuring Machines 40" and 58" goods.

8 Yard Sipp Warpers, 83" and 72" Skein Winders, 60 80, 100 spindles.

Looms are non-automatic and are equipped with feelers, pick clocks, warp stop motions, let-offs, beams, ½ HP, 3/60/220 motors.

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68—C&K, 2x1, 52" Reedspace Looms
6—C&K, 2x1, 54" Reedspace Looms
9—#90 Universal Winders
5—#90 Universal Winders with Bunchbuilders
1—72" Sipp Warper
1—83" Sipp Warper
4—120 Spindle Sipp Winders
1— 80 Spindle Sipp Winder
1—Blake Measuring Machine, 58" Drum
1—Hermas Measuring Machine, 58" Drum

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6—Sets 48" x 48" Worsted Cards.
48—C & K 92" 4 x 1 Automatic Looms, M.D. 25 harness.
24—C & K 92" 4 x 1 Automatic Looms, M.D. 25 harness.
48—Draper Model E Looms 36" R. S.
48—Draper Model E Looms 60" R. S.
6—Collins Twisters, tape drive, 2½" ring, 3½" ga.
1—Barber Coleman Yarn Conditioner, complete, new.
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1—Worcester Warp Compresser Creel, 410 live ends, almost new.

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200—48", 52", 54", 56" R.S. C&K Plain Silk Looms, 20 h., motor driven
60—51½" R.S. Draper Model E Rayon Looms, 16 harness
98—52" R.S. Draper Mod. D Dobby Looms
20—52" B.S. C&K 2x1 Plain Looms, Gem heads, motor driven
30—54" B.S. C&K 4x1 Plain Looms, dobbies, motor driven
10—56" C&K 2x1 S-3 Auto. Shuttle Change Looms, 25 harness
24—72" R.S. Draper Mod. D 2x1 Looms, with jacquards
8—72", 84" R.S. C&K 4x4 Box Looms with jacquards
30—72", 82" C&K 4x4 Box Looms, motor driven
60—79½", 82" Draper Mod. D Looms, 20 harness, motor driven
16—82" C&K Veribest Looms, 25 h., motor driven
100—82", 92" C&K 4x1 Auto., 25 harness Looms, motor driven
8—100" C&K 2x1 Auto. Looms, 25 harness
6—110" C&K 4x4 Box Looms, 25 harness
8—Paul Muller Label Looms, 1938-44, with C&K Jacquards
2—45" Simpson type Winders
1—50" Silk Calender
1—60" Butterworth 5-roll Calender

1—67½" Yale Semi-Decater, 36" dia. cylinder
1—40" P&W Doubling and Boarding Machine
1—82" P&S Rev. Stick Loop Dryer
5—250#—500# K.W. Skein Dyeing Machines
1—40 arm Buhlman Skein Dyeing Machine
1—52" Continuous Vat Dyeing Machine, complete
1—6 string Stainless Steel lined Dye Kettle
2—60" Hunter 1941, 8-cylinder double doffer Garnetts, complete, with running-out aprons, compression rolls, batt folders, slitters, P&S cone willow
2—Kiers; 8x14' and 9x13'; individual heaters, pumps, motors
1—24 arm S. D. Skein Mercerizer
2—360 sq. J&B 3" gauge Mules, Brand New
5—45"—50" 2 and 3 roll Padders
1—66" V. VI. Palmer complete with Quetch
4—52"—92" Gessner Cloth Presses
1—60" R.B.&F. 4-color Print Machine, will accommodate print rolls 30" circumference
1—72" Birch Bros. 4-burner Singer (like new)
1—60 ft. 41" opening Butterworth Clip Tenter
1—70'x148" Textile Pin Tenter, carbomatic gas burners.

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1 Smith drum 7 arm stainless steel, motorized dyeing machine excellent condition.
42 C&K S-5 automatic bobbin change motorized loom complete.
C&K 4x4 72" large shuttle boxes motorized, complete — weaving 68" cloth.
20 C&K 4x4 large shuttle boxes motorized loom — complete, weaving 52" cloth.
80 Atwood Monarch type double deck spinners, motorized, 184 spindles each, complete excellent condition.
70 Draper model C automatic shuttle changing motorized looms complete — weaving 46" cloth.
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Also 5 and 3 can slashers. Complete line of winding, warping, quilling and coning machinery complete line also of mill supplies.

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22,000	Fibre Head Winding Spools	3 1/4"	3 3/8"	1 5/8"
10,000	Stainless Steel Steaming Shafts	3"	3 1/4"	1 5/8"

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Motorized - 80 & 100 spindle 4" & 5" spindle spacing

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56—H&B 40" cards, 26" doffers, 12" coilers.
4—Dobson & Barlow 40" cards, 27" doffers.
48—Deliveries Saco-Lowell drawing, 6-delivery frames.
8—Saco-Lowell 9x4 1/2 slubbers, 104 spindles each, J3 long draft.
8—Saco-Lowell 8x4 slubbers, J3 long draft; 6 frames 152 spindles each, 2 frames 128 spindles each.
23—Saco-Lowell 9x4 1/2 intermediates, regular draft; 12 frames 104 spindles each, 2 frames 96 spindles each, 9 frames 78 spindles each.
46—Fales & Jenks 3 1/4" gauge spinning frames, 2" rings, tape drive, 252 spindles each, Roth long draft.
23—H&B 3 1/2" gauge spinning frames, 2" rings, 1934 model, tape drive, Roth long draft; 20 frames 252 spindles each, 3 frames 264 spindles each, individually motor driven.
28—H&B 3 1/2" gauge spinning frames; 14 204 spindles, each, 14 228 spindles each, tape drive, 9" traverse.
6—Whitin 3 3/4" gauge spinning frames, 240 spindles each, Saco-Lowell long draft, 4 spindle band drive.
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72—Draper Modified D looms, 70" reed space, 2 harness, motor driven.
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80—Draper Modified D looms, 65 1/2" reed space, belt drive.
250—C&K Cotton King looms, 48 1/2" between swords, automatic 4x1 box, motor driven, 25 harness dobbies.

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1—P.&S. 60" Card Feed (Mod. 535—Practically New)
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2—Schofield 48" automatic Duster (box)
1—Woonsocket 36" x 36" ceiling condenser & blower
1—"Parkhurst" 48" Burr Picker with Feed
1—D. & F. 48" Fearnaught Mixing Picker
1—D. & F. 40" Mixing Picker, 6 bar
3—Dodge, Schofield 18" x 30" Shoddy Pickers
1—Sargent 36" Duplex Burr Picker
2—Tolhurst 48" S S Extractors (New)
1—Draper 2½", 200 Sp. Novelty Twister.

WARPING AND WEAVING

4—D. & F. or Altemus Warpers—rebuilt to order—82"—120". Pin or Pinless
1—Entwistle Hi Speed 54" Beamer & Creel
1—Globe Ball Warper & Creels
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24—C. & K. W2, 82" 4x1 Looms
4—C. & K. 92" 4x1 automatic Looms
4—C. & K. 82" 4x1 automatic Looms
12—C. & K. 82" (4x4) Box Looms
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UNIVERSAL #50 & #90 WINDERS REBUILT TO ORDER

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1—Foster, Mod. 101, 100 sp. Cone Winder
1—Foster, Mod. 12, Skein to cone Winder, 60 sp.
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10—Lindsay Hyde Adjustable Skein Reels
1—Whitin Quiller 2½" Gauge (long chain)
1—Lasenby 15 sp. Cop Winder

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1—Padder, 72", 2 roll, Hydraulic
2—Birch Bros. Doub. & Tacking Mach. (92")
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1—F. & W. 68" 4 cyl. Brush & Sander
2—Teasle Gig's, double cylinder (60")
2—Rope Soaping Machines (lead lined)
1—Yorkshire Crab 72"—3 bowl
1—S/S Lined 66" Wetting-out Tank with squeeze rolls (Pneumatic Pressure)
2—F. & W. 68" Mod. A Double Shears
2—Voelker 83½" D. B. Presses
2—F. & W. 60" Semi-Decaters
1—Set Dry Cans (4) 27" Copper
24—Horizontal 100" Dry Cans, Copper, Tinned Steel
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Departmental Liaison Men

(Continued from page 222)

solving its problem. This plan may be modified to suit the particular needs of different mills, but in this mill it was based on the premise that in order to do the best possible job with labor relations, someone in every organization should be given the sole responsibility of living with the workers or the union. The plain fact is that no matter how much mills try to train and educate supervision, the supervisors are never going to get 100% interested in labor relations. Their primary concern is with production.

To free production people from time-consuming labor problems and to allow the personnel department to understand better the production departments problems and vice-versa, this mill proposed to bring two new men into the personnel department for the purpose of setting up a labor-relations-liaison system. Advantages of such a system proved two-fold:

1. With the assignment of one of these two personnel representatives to each of the major production departments (yarn manfacturing and warp preparation through finishing; and this set-up means each one actually having a desk in these departments), more accurate information regarding grievances and personnel matters reached the industrial-relations office. The industrial-relations director obtained a clearer picture of what was going on in the mill and was therefore in a better position to correct or back up production supervisors in their dealings with employees and the union.
2. Production superintendents were able to delegate grievance fact-finding duties to their personnel representative and also to have desired labor-relations policies carried out for them through this representative.

The personnel-liaison man reported directly to the director of industrial relations, worked with production heads in each case, and assisted all other levels of supervision.

The personnel department initiated the program by recruiting the new men either from within the mill or from an outside source. Each individual had previous training and experience in personnel work or related fields and was definitely a man qualified, in everyone's opinion, to handle a special assignment. These men put

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(Continued from page 270)

on old clothes and spent six months going through every single department in the mill. The idea was to let them work changing shifts and to give them an opportunity to study manufacturing processes and to meet employees, section hands, overseers, and all others concerned with each operation. During this period, they were able to see and think production. After six months they were brought back to the industrial-relations office, where they were familiarized with all phases of industrial relations as practiced in the mill. The men sat in on contract negotiations, arbitration cases, and fourth-step grievances; they met union representatives. Each one studied personnel records, hiring and interviewing, compensation claims, and other details. At the end of the training, the mill had two personnel men who knew something about manufacturing, personnel, and the union.

The Results

Here are the results of the plan. Since it dealt with human beings, the plan was not perfect. There were certain dangers. Each liaison man in his capacity of go-between and advisor had to be careful at all times not to undermine the authority or prestige of the supervisor. He had to work to build up the relationship between supervisor, employee, and union representative. These relationships are basic; so the liaison man never acted as a substitute for the foreman in personnel disputes. The personnel representative operated through the supervisor, remaining in the background, backing him up by helping him to make his decisions stick.

The new personnel representative stepping into his production liaison job on completion of his training frequently ran into suspicion and probably some resentment. He was often labeled a "personnel man," and his future success was determined by how well he handled the first problems shuttled his way under the watchful eyes of all concerned. However, as he developed on the job, supervisors, union officials, and employees alike began coming to him with problems big and small, ranging all the way from interpretation of regulations under the Walsh-Healey Act for the administration of U. S. Government contracts to settlement of minor grievances. One of the liaison man's most important responsibilities was to show supervision at every level how to follow the union contract and company policies without getting into trouble, and still accomplish desirable time-saving and cost-cutting programs.

(Continued on page 273)

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(Continued from page 271)

Truth and facts are the most powerful agents at management's disposal in working out production and personnel changes that may be unattractive to the union. But this is no easy task. The liaison man has to sell ideas to his production people. While he has the responsibility for getting things done right from the personnel angle, he may not, in the beginning, have much authority until he earns it. He will be sitting on the sidelines if he cannot get his ideas across and if he doesn't learn as much about production technique as possible.

Now on the plus side of the ledger, the personnel representative in the mill studied had one responsibility—labor relations. His job was to live with people and to be available to everyone. He often spent the first 20 min. of a morning discussing with a division superintendent an absentee problem in a women's department, then move on to another talk with some other production men about a work-load case or a piece-rate gone wild, and then be called by the union to attend a second-step grievance meeting. Later in the day he was often with the industrial-relations director asking for a policy supplement on a particular article of the contract that has been confusing on the job.

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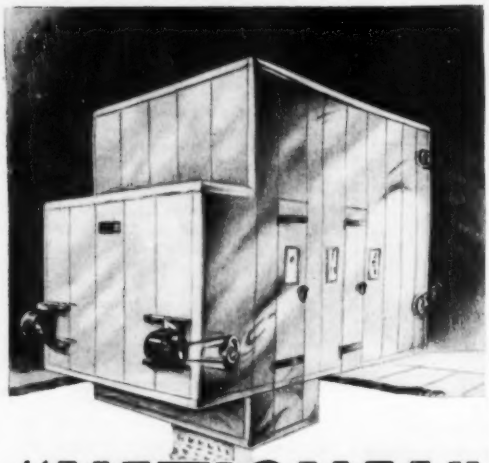

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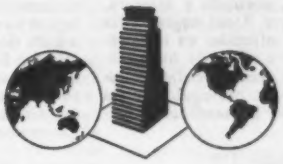

▸ **Brief Summaries in Spanish, French, and German of the Major Feature Articles in This Month's Issue**

Español

Página 98

Visita Pictórica a una Tejeduría de Algodón. Esta fábrica de la Carolina del Norte está enteramente equipada con acondicionamiento de aire excepto en la sala de encoladura de urdimbres. Los materiales son manipulados lo menos posible por los empleados durante la elaboración para poder mantener la alta calidad. Una innovación probada con éxito aparente es la remoción de las cubiertas sobre las encoladoras para evitar la acumulación de pelusilla o borra. El vapor es extraído por un extractor de aire colocado en el techo.

Página 102

Cepillos Provisores de Cilindro Estampador Instalados Hace 18 Meses...Todavía siguen Funcionando Bien. Los cepillos provisores de cilindro estampador hechos de un núcleo de madera y cerdas de Tampico duraban anteriormente unos diez días en la fábrica. Ahora se han probado núcleos de metal y cerdas de nilón. Después de algunos experimentos para obtener el núcleo del peso apropiado, el nuevo tipo de cepillo provisor dió resultados completamente satisfactorios. El primer cepillo instalado ha estado funcionando por 18 meses y está todavía en excelentes condiciones.

Página 103

Alimentación de los Empleados de la Fábrica. Este estudio de diez páginas, documentado e ilustrado, de los diversos métodos de servir alimentos a empleados de una fábrica, hace resaltar los factores que influyen al tomar una decisión en su propia fábrica para la alimentación de la empleomanía. Se tratan las ventajas y desventajas de utilizar máquinas vendedoras, vagones ambulantes comedores, cantinas, y cafeterías. Otras consideraciones son si una compañía debe administrar el servicio o si se debe dar una concesión a un comerciante de la localidad, o a una de las organizaciones nacionales de servicio de comidas.

Français

Page 98

"Excursion photographique" dans un tissage de coton. Cette usine de la Caroline du Nord possède un système de conditionnement d'air dans toutes ses divisions, sauf dans celle de l'encollage. Les produits en voie de fabrication sont manipulés par le personnel aussi peu que possible, afin de maintenir une qualité de premier ordre. Une nouveauté qui semble avoir du succès est la suppression des hottes d'aspiration des encolleuses, afin de supprimer les accumulations de duvet. Cette suppression n'a qu'une influence fort minime sur la capacité de séchage. Un aspirateur logé dans le plafond aspire la vapeur.

Page 102

Brosses de rouleaux d'impression fonctionnant encore après 18 mois. Des brosses de rouleaux d'impression faites de fibres de tampico montées sur cylindres de bois ne duraient que dix jours dans une certaine usine. On essaya un cylindre métallique garni de fibres de nylon. Après certains essais pour trouver un cylindre de poids approprié, le nouveau rouleau donna complète satisfaction. La nouvelle brosse, installée il y a 18 mois, continue à donner complète satisfaction.

Page 103

Alimentation du personnel. Cette discussion, longue de dix pages et illustrée, traite des diverses méthodes pour alimenter le personnel d'usines et expose certains facteurs à considérer avant de prendre des décisions en cette matière. L'auteur énumère les avantages et les inconvénients des machines à vendre automatiques, des wagonnets, des cantines et du système "Cafeteria." Ce service d'alimentation, devrait-il être opéré par l'usine elle-même, ou par un concessionnaire local, ou bien par une grande firme à succursales? L'auteur s'efforce de répondre à ces questions.

Deutsch

Seite 98

Kamerafuehrung durch ein Baumwollfabrik. Diese North Carolina Fabrik ist durchweg luftgekuehlt, mit Ausnahme der Schlichterei. Die in Bearbeitung befindlichen Materialien werden von den Angestellten so wenig als moeglich angefasst, um prima Qualitaet aufrecht zu erhalten. Eine allem Anschein nach mit Erfolg versuchte Neuerung, ist das Entfernen der Hauben von den Schlichtmaschinen, um die Ansammlung von Flug zu vermeiden. Die Trockenfaehigkeit ist davon wenig beeinflusst. Eine Absaugevorrichtung in der Saaldecke entfernt den Dampf.

Seite 102

Farbdruckzylinderbuersten laufen 18 Monate und sind noch immer in Betrieb. Farbdruckzylinderbuersten aus einem hoelzernen Kern und Tampicoborsten erzeugt, hielten ungefaehr 10 Tage in einer bestimmten Fabrik. Ein Metallkern und Nylonborsten wurden versucht; nach einigen Experimentieren, um das richtige Gewicht des Kernes herauszufinden, arbeitete die neuartige Farbdruckzylinderbuerste zur vollkommenen Zufriedenheit. Die erste Buerste, die installiert wurde, daeuft nun seit 18 Monaten und ist noch in erstklassigem Zustand.

Seite 103

Mahlzeiten fuer Fabriksangestellte. Die in 10 Seiten wiedergegebene und illustrierte Diskussion ueber die verschiedenen Methoden, Fabriksangestellte mit Essen zu versorgen, hebt die in Betracht kommenden Faktoren hervor, ausgehend von der Erwaegung das Arbeitspersonal in der Fabrik zu verkoestigen. Vor- und Nachteile von Speise-Automaten, bewegliche Speisewagen, Kantinen und Cafeterias stehen unter Diskussion. Andere Erwaegungen sind: Ist es empfehlenswert, dass die Firma selbst das Speiseunternehmen fuehren soll oder eine konzessionierte Person aus demselben Ort, oder eine im Lande bekannte Restaurationsorganisation.

Página 113

Tablas de Referencia del Mecánico de Telares. Los defectos en el hilo y los géneros, hechos en el molinaje, encanillado, urdido, encolado y tejedura, son indicados por líneas negras a las diversas causas ofrecidas en estas tablas. Refiriéndose a la tabla, los mecánicos de telares pueden verificar rápidamente las causas principales de los defectos y tomar las medidas correctoras.

Página 119

Elimine Sus Costos de Remallado. Las fábricas de medias menguadas están haciendo una puntera tejida redonda en lugar de una puntera remallada cuadrada. Al eliminar los trabajos del remallado, las fábricas se ahorran de 10 a 15 cts. por docena de pares de medias. La puntera es tejida redonda al graduar la máquina par desenganchar gradualmente las agujas del tren de remallado convencional hasta que queden tejiendo solo ocho agujas para la galga 51 y doce para la galga 60, en este tipo de medias. Un mecánico de telares necesita día y medio para convertir una máquina Reading a "puntera sin remallar" y un día para convertir una máquina Kalio.

Página 122

Elaboración de Desperdicios de Lana. Se ofrecen detalles y fotografías de una moderna planta abridora de desperdicios de lana. En una tabla se han arreglado dos tamaños de rodillos, las velocidades y los ajustes para una abridora "garnett" de 5 cilindros. El artículo trata también de cómo se colocan las mezclas de trapos, los retazos de sastres, y los hilos; qué cantidad de emulsión debe usarse; y cómo y porqué una nueva máquina, la "desmenuzadora", ha reemplazado en esta moderna planta a las deshilachadoras de trapos.

Página 124

20 Cosas que Ud. Debe Saber Sobre los Detergentes. En este artículo se contestan veinte preguntas sobre detergentes. Algunas de ellas son: ¿Qué propiedades debe tener un buen detergente? ¿Qué son detergentes aniónicos, catiónicos y noniónicos? ¿Dirá el análisis químico si un detergente en particular hará una labor específica? ¿Lo dirán los ensayos físicos? ¿Cuál es el efecto de las sales orgánicas en los detergentes? ¿Cuán importante es la espuma? ¿Afectan los detergentes la resistencia de los géneros y su manipulación? ¿Cuál es la mejor manera de elegir un detergente?

Página 126

Teñido de la Fibra Acrílica de la Chemstrand Corp. La estructura química de la nueva fibra acrílica de la Chemstrand Corp., Acrilan, está siendo avaluada en los E. U. A., y es de naturaleza tal que se pueden usar con

Page 113

Tableaux de référence pour metteurs au point. Des défauts dans le fil ou le tissu ayant leur source au moulinage, au canettage, à l'ourdissage, à l'encollage et au tissage ont leurs causes déterminées dans les diverses sections de ce tableau. Les metteurs au point n'ont qu'à consulter ce tableau pour trouver les causes principales produisant les défauts et pour procéder aux réglages nécessaires.

Page 119

Supprimez vos frais de remaillage. Les fabriques de bas diminués sont en train de passer aux bas à bouts ronds, remplaçant le bas à bout carré, remaillé. La suppression du remaillage représente une économie de 10 à 15 cents à la douzaine. Le procédé consiste à passer de la rangée de remaillage à un rétrécissage progressif qui ne laisse finalement que huit aiguilles en jauge 51 et 12 en jauge 60. La transformation prendra au metteur au point un jour et demi pour un métier Reading et un jour pour un métier Kalio.

Page 122

Traitement des déchets de laine. Cet article illustré donne des détails concernant un garnettage de laine. Les dimensions des rouleaux, leur vitesse, leur garniture et réglage sont présentés sous forme de tableau, pour un garnettage à cinq tambours. L'article traite également du mélange de chiffons, des déchets de tailleurs et de fabricants de confection, des déchets de fils; de l'emploi des émulsions et huiles d'ensimage et explique pourquoi une nouvelle machine, le "shredder" (ou "déchireur"), est en train de remplacer dans les usines modernes les anciens loups-ouvreurs.

Page 124

Vingt choses que vous devriez savoir concernant les détergents. L'article discute vingt points concernant les détergents. En voici quelques-uns: Quelles sont les propriétés que doit avoir un bon détergent? Qu'est-ce qu'un détergent anionique, cationique et non-ionique? L'analyse chimique peut-elle révéler si un détergent déterminé est approprié pour un certain cas? Est-ce que des analyses physiques vous éclaireront à ce sujet? Quels effets des sels organiques auront-ils sur des détergents? Quelle est l'importance de la formation d'écume? Les détergents affectent-ils de façon défavorable la résistance et le toucher d'un certain article? Quel est le meilleur système pour choisir un détergent?

Page 126

Teinture des fibres acryliques de la Chemstrand Corporation. La structure chimique de la nouvelle fibre acrylique

Seite 113

Referenztabelle fuer Mechaniker. Stoff- und Garndefekte durch Zwirnen, Spulen, Kettenscheren, Schlichten und Weben sind durch schwarze Linien mit den verschiedenen Ursachen, die auf einer Tabelle angefuehrt sind, verbunden. Durch Hinweis auf diese Tabelle koennen die Mechaniker rasch die Hauptursachen der Defekte feststellen und korrektive Massnahmen treffen.

Seite 119

Abschaffung der Kettelkosten. Vollfassionierte Strumpwirkereien machen rundgestrickte Zehen anstatt rechteckig abgekettelte. Durch Ausscheidung des Kettelverfahrens ersparen Fabriken 10-15 Zente der Erzeugungskosten per Dutzend Struempfe. Die Zehe wird rundgestrickt, indem man die Maschine so einstellt, dass sie nach und nach die Nadeln von der konventionellen Maschenreihe loslaesst bis nur noch 8 Nadeln fuer 51 Gauge und 12 fuer 60 Gauge Struempfe stricken. Ein Mechaniker benoetigt 1½ Tage, um eine Reading Maschine in eine fuer "unabgekettelte Zehen" umzustellen, und einen Tag fuer die Umstellung der Kalio Maschine.

Seite 122

Kunstwollerzeugung. Einzelheiten ueber eine Wolldroussieranstalt werden beschrieben und illustriert. Zylinder und Walzengroessen, Bespannung und Einstellung fuer eine 5 Zylinder Drousette sind auf einem Tableau ausgefuehrt. Es wird darauf hingewiesen wie man Mischungen von Hadern, Tuchabschnitten und Garne auflegen soll; wieviel Spickoel verwendet wird; und wie und warum eine neue Maschine, der Fadenreisser, die konventionelle Reissmaschine in dieser Fabrik ersetzt hat.

Seite 124

20 wissenswerte Tatsachen bezueglich Reinigungsmittel. Zwanzig Fragen betreffs Reinigungsmittel werden beantwortet. Einige davon sind: Welche Eigenschaften muss ein gutes Reinigungsmittel besitzen? Was sind anionische, cationische und nonionische Reinigungsmittel? Wird eine chemische Analyse ergeben ob ein gewisses Reinigungsmittel eine bestimmte Arbeit leisten wird? Wird dies bei einem physikalischen Versuch der Fall sein? Was fuer Wirkung haben organische Salze auf die Reinigungsmittel? Wie wichtig ist Schaeumen? Sind Reinigungsmittel schaedlich fuer Gewebe und Haende? Welche Gesichtspunkte sind wichtig fuer die Auswahl eines Reinigungsmittels?

Seite 126

Faerben von Acrylic Fasern der Chemstrand Corp. Die chemische Struktur der Chemstrand Corp.'s neuen acrylic

éxito los tintes de los tipos ácidos o para lana. Los tintes de acetato, cuba, naftol, y otros pueden aplicarse hasta cierto punto variando la técnica. Las variables importantes en el teñido del tipo de lana tratadas en el artículo comprenden temperatura, largo del tiempo de teñidura, y el pH del ácido usado.

Página 129

Métodos de Control de Calidad de Medias. La calidad de los calcetines especiales producidos en la Fábrica de Medias Maryon está regulada por la inspección y ajuste periódicos de las máquinas. Otras medidas tomadas son la colocación de instrucciones para la tejedura para cada estilo en cada máquina que vaya a realizar esa labor; buenos procedimientos de trabajos que mantengan limpias las máquinas y la sala de tejedura; y la lubricación completa de todas las máquinas cada cambio de turno.

Página 131

Las Buenas Instalaciones Eléctricas Evitan Incendios. Se analizan las causas del creciente número de incendios en las hilaturas de algodón causados por el mal uso del equipo eléctrico, y se ofrecen soluciones a los problemas. Las recomendaciones son: Instalación de disyuntores al aire en lugar de los tipos de inmersión en aceite; instalación de protectores de onda para resguardar el equipo contra los rayos; uso de disyuntores en cascada para reemplazar la capacidad inadecuada de los disyuntores; un sintema de distribución de la propiedad de la fábrica en lugar de grandes bancadas de transformadores; mejores cubiertas del equipo para reemplazar las que admitan hilazas; y combinadores protectores a 4 amperios.

Página 135

Cómo una Fábrica de Ropa Interior de Punto Utiliza Métodos de Producción en "Lotes". Una fábrica de ropa interior de punto de algodón obtiene tejido más uniforme y mejores resultados en el blanqueado y teñido desde que adoptó la "producción en lotes". La producción desde el salón de corte y costura hasta el tejido, ha sido proyectada en todas sus fases de manera tal que todas las piezas de una prenda son hechas del mismo lote de hilo. Las ventajas principales son mejor control de la calidad y mayor uniformidad en el blanqueado y teñido de las piezas de una prenda de vestir.

Página 139

Técnica del Acondicionamiento de Aire. Los ingenieros de las fábricas de tejidos norteamericanas han encontrado en la proyección del acondicionamiento de aire eficiente de sus fábricas, que no existen reglas establecidas cuando se trata de elegir el diseño de los tableros de las ventanas aisladas de las fábricas individuales. Los ladrillos de la Chemstrand Corporation, Acrilan, que l'on essaye actuellement aux Etats-Unis, est telle qu'elle permet d'employer soit des colorants acides soit des colorants laine. En outre des colorants acetate, à la cuve, naphtol et d'autres encore peuvent être employés dans une certaine mesure moyennant certaines modifications des procédés d'emploi. Parmi les facteurs d'importance discutés plus en long sont ceux qui se rapportent à la température, la durée de teinture, et le pH de l'acide employé dans l'emploi des colorants laine.

Page 129

Comment contrôler la qualité des chaussettes. La qualité de chaussettes spéciales produites par la Maryon Hosiery Mill est contrôlée par une inspection périodique et un réglage des métiers. En outre chaque machine est munie d'un tableau d'instructions pour chaque qualité. L'usine veille également à ce que le matériel et les salles soient d'une propreté parfaite et à ce qu'un graissage complet soit fait à chaque équipe.

Page 131

Des installations électriques bien faites préviennent les incendies. L'auteur analyse les causes du nombre croissant d'incendies d'usines de coton attribuables à un emploi peu judicieux de leur équipement électrique et préconise un certain nombre de remèdes. Parmi les suggestions offertes, citons: remplacer les coupe-circuits à huile par des coupe-circuits à air, emploi d'un appareillage de protection contre la foudre, un système de distribution électrique appartenant à l'usine de préférence à des groupes de transformateurs, et matériel électrique complètement étanche aux poussières.

Page 135

Une fabrique de sous-vêtements tricotés introduit le système de production par "lots". Ce système a permis à une usine d'articles en coton de produire une qualité plus uniforme au tricotage, au blanchissage et à la teinture. Le système qui s'étend du tricotage jusqu'à la dernière opération de couture est basé sur l'emploi d'une même qualité de coton pour un "lot" déterminé de marchandise. Les avantages dérivant de la méthode sont: blanchissage et teinture uniformes des pièces constituant le sous-vêtement et plus grande facilité de contrôle de la production.

Page 139

Conditionnement d'air. Les ingénieurs américains ont trouvé qu'en étudiant le conditionnement d'air de leurs usines il n'y avait pas de règles absolues pour le traitement des fenêtres. Le remplis-

Faser, Acrilan, die jetzt in der USA geschaetzt wird, kann weder mit saeurenoch Wollfarbstoffe erfolgreich gefaerbt werden. Acetat-, Kueppen-, Naphtol- und andere Farbstoffe koennen bis zu einem bestimmten Grad durch Veraenderung der Faerbereitechnik angewandt werden. Wichtige Veraenderlichkeiten des Woll-Typ-Faerbens, die in diesem Artikel besprochen werden, sind u. a. Temperatur, Laenge der Faerbezeit und pH der gebrauchten Saeure.

Seite 129

Strumpferzeugungs-Qualitaetskontrollen. Die Qualitaet der Spezialhalbstrumpfe, welche in der Maryon Strumpffabrik erzeugt werden, wird durch periodische Inspektion und Adjustierungen der Maschinen kontrolliert. Andere Schritte, die unternommen werden, sind Anbringung von Strickinstruktionen bei jeder Maschine fuer jedes auf der Maschine laufende Muster, Vorschriften fuer Reinhalten der Maschinen und der Fabrikationsraeume, gruendliches Oelen der Maschinen in jeder Schicht.

Seite 131

Gute elektrische Einrichtung verhuetet Braende. Ursachen, der durch Missbrauch von elektrischen Equipment zunehmende Zahl von Braenden in Baumwollfabriken, werden analysiert und Loesungen zu deren Verhuetung gegeben. Empfohlen wird: Anbringung von Ausschalter mit Luftunterbrecher, um in Oel getauchte Typen zu ersetzen; Errichtung von Blitzableiter um das Equipment gegen Blitzschlaege zu schuetzen; Verwendung von stufenfoermigen Kurzschlussunterbrechern, um unzulaengliche Kurzschlusskontrolle zu ersetzen; eine der Fabrik gehoerende Verteileranlage, anstatt grosse Transformatoren; bessere Maschinenverkleidung, um solche, die Flug zulassen, zu ersetzen und schliesslich Sicherungen mit je 4 Amp.

Seite 135

Wie eine Strickwarenfabrik fuer Unterwaesche "Partie" Erzeugungsmethoden verwendet. Eine Strickwarenfabrik fuer Baumwollunterwaesche erzielte gleichmaessigeres Stricken, Bleichen und Faerben seit sie die Erzeugung in "Partien" eingefuehrt hat. Vom Stricken bis zur Ablieferung in die Zuschneide- und Naehabteilung ist der Erzeugungsprozess derart geplant, dass alle Teile des Waeschestueckes von demselben Garnlos gemacht sind. Hauptvorteile sind bessere Qualitaetskontrolle und gleichmaessigeres Faerben und Bleichen aller Waescheteile.

Seite 139

Einbauen von Luftkuehlungsanlagen. Amerikanische Textilingenieure haben beim Planen einer gut funktionierenden Luftkuehlung ihrer Fabriken heraus-

en las ventanas pueden causar un costo inicial quizás más costoso, pero en la mayoría de los casos se obtienen ahorros generales en el tamaño del equipo de acondicionamiento necesario y en la uniformidad de la temperatura y de la humedad relativa obtenida.

Página 208

Estudios Sobre Agentes Impresores y Espesantes. Recientemente se han hecho investigaciones por un grupo de obreros ingleses de investigación en las características de los agentes impresores y espesantes. Sus estudios han sido en el campo de los almidones, productos de degradación del almidón, y derivados del almidón. Los resultados sobresalientes obtenidos con un mejoramiento en el agotamiento del tinte parece proporcionar derivados del grupo carboxílico (COOH) que sean más fáciles de trabajar.

Página 222

Los Empleados de Enlace Departamental Reducen el Costo de las Relaciones Obreras. Una fábrica de géneros de lana y de estambre entrenó empleados para servir como expertos en los procedimientos de operación de la fábrica y sus problemas, luego los colocó a cada uno en la oficina del supervisor departamental para ayudar a resolver los problemas del personal. Los resultados han sido una gran cantidad de quejas resueltas satisfactoriamente con muy poca supervisión, y reducción del tiempo empleado por los gerentes de la fábrica en la atención de estos problemas.

sage des croisées au moyen de briques occasionne une dépense initiale relativement importante mais permet la plupart du temps de réduire les dimensions de l'appareillage. En outre la température et l'humidité sont maintenues avec plus de précision.

Page 208

Étude sur les épaississants et autres produits employés à l'impression. Un groupe de spécialistes anglais a récemment fait des recherches sur les caractéristiques de ces produits. Leurs études ont éte conduites spécialement dans le domaine des amidons, des produits obtenus par actions chimiques sur ces matières et de leurs dérivés. Des résultats remarquables ont été obtenus portant surtout sur l'absorption des colorants qui semble faciliter la formation des dérivatifs de groupes carboxyl plus faciles à travailler.

Page 222

L'emploi d'adjoints aux chefs de fabrication réduit le coût des disputes ouvrières. Une usine de cardé et de peigné forma un groupe d'employés et les mit au courant des questions et des problèmes de fabrication avant que de les placer comme adjoints aux chefs de fabrication pour la solution des disputes ouvrières. De nombreuses plaintes de la part du personnel purent de la sorte être réglées avant qu'elles ne furent passées à des échelons plus élevés, débarassant de cette façon le personnel supérieur de cette corvée.

gefunden, dass es keine starren Regeln in der Auswahl der Fensterabdichtung gibt. Das Zumauern der Fenster verursacht vielleicht eine ziemlich teure Erstausgabe, aber in den meisten Faellen ergeben sich Ersparungen bei Berechnung der Groesse der zu gebrauchenden Kuehlungsanlage, Bestaendigkeit der Temperature und der zu erlangenden relativen Feuchtigkeit.

Seite 208

Studien ueber Verdickungs- und Bedruckungsmittel. Einige britische Forscher haben letzthin gemeinsame Forschungen ueber die Eigenschaften der Verdickungs- und Bedruckungsmittel gemacht. Ihre Studien bezogen sich auf Staerkeschlichte, staerkevermindernde Produkte und Staerkederivate. Aussergewoehnliche Resultate wurden mit Verbesserungen in Farbexhaustion erzielt, die anscheinend leichter mit Carboxilgruppen-Derivate bearbeitet werden koennen.

Seite 222

Abteilungs-Verbindungs Personal vermindert Kosten. Eine Woll- und Kammgarnfabrik hat Leute gruendlich in Fabrikationsprozesse und deren Probleme abgerichtet, dann jeden in das Abteilungsleiterbuero gegeben, um Angestelltenprobleme zu loesen. Das Resultat war, dass eine erhoehte Anzahl von Verdriesslichkeiten schon an untergeordneter Stelle beseitigt wurden und hoehere Leiter weniger Zeit mit diesen Problemen zubringen mussten.

Textile Vocabulary	Vocabulario Textil	Vocabulaire Textile	Textilfachausdruecke
bleaching	blanqueo	blanchissage	Bleichen
clothing	guarnición	garniture	Bespannung
cylinder	cilindro	tambour	Zylinder
dye exhaustion	agotamiento del tinte	absorption des colorants	Farbexhaustion
dyeing	teñido	teinture	Faerben
emulsion	emulsión	huile d'ensimage	Spickoel
exhaust fan	extractor de aire	aspirateur	Absaugevorrichtung
full-fashioned hosiery	medias menguadas	bas diminués	vollfassionierte Struempfe
garnetting	apertura de desperdicios de lana	garnettage	Droussieren
gauge	galga	jauge	Gauge
knitting	tejido	tricotage	Stricken
lint	pelusilla, borra	duvet	Flug
loomfixer	mecánico	metteur au point	Webstuhlmekaniker
looping	remallado	remaillage	Kettel
lubrication	lubricación	graissage	Oelen
print-roll furnisher brushes	cepillos provisores de cilindro estampador	brosses de rouleaux d'impression	Farbdruckzylinderbuersten
quilling	encanillado	cannetage	Spulen
rag pickers	deshilachadoras de trapos	loups-ouvreurs	Reissmaschinen
setting	ajustes	réglage	Einstellung
shift	turno	équipe	Schicht
slasher hoods	cubiertas sobre las encoladoras	hottes d'aspiration des encolleuses	Haube von den Schlichtmaschinen
slashing	encolado	encollage	Schlichten
tensile strength	resistencia	résistance	Staerke, Gewebe
thickeners	agentes espesantes	épaissants	Verdickungsmittel
throwing	molinaje	moulinage	Zwirnen
warping	urdido	ourdissage	Kettenscheren
waste	desperdicios	déchets	Abfall
weaving	tejedura	tissage	Weben

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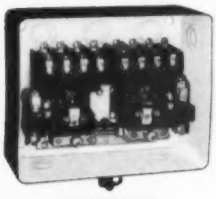

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